Warning:
Use of controls or adjustment or performance of procedures other than those specified in this manual may result in hazardous radiation exposure.

Note: Some illustrations may be slightly different from your machine.

Note: Certain options may not be available in some countries. For details, please contact your local dealer.

Do not make copies of anything which is prohibited from copying by law. The following items are normally prohibited rom copying by national law. Other items may be prohibited by local law.

- **Money**
- **Stamps**
- **Bonds**
- **Stocks**
- **Bank drafts**
- **Checks**
- **Passports**
- **Driver's licenses**

The copy samples in this Operating Instructions differ somewhat from actual copies due to printing effects.

The coloring of each Color key may differ somewhat from the actual copies.

This copier has a function that prevents making counterfeit bills. So, if you use an original image that is similar to a bill, you may not get proper copies.

SAFETY PRECAUTIONS

About Indications

This manual and product indicate various cautions to allow you to use the product safely in the correct way and to prevent injuries to you or other persons and damages to the property. These indicators and their meanings are shown below.

⚠ ***Warning*** ***Indicates that a personal death or serious injury might occur if you handle your copier incorrectly ignoring this warning.***

⚠ *Caution* *Indicates that a personal injury or only a property damage might occur if you handle your copier incorrectly ignoring this caution.*

Examples of Indications

△ indicates an item for which you should take care.

⃠ indicates a prohibited operation.
Such an operation is drawn specifically within ⃠.
(The mark on the left indicates “No disassembling.”)

● indicates an operation which is forced or specified to be performed.
Such an operation is drawn specifically within ●.
(The mark on the left instructs you to “remove the plug from the wall outlet.”)

To use your copier safely, the following warnings should always be followed:

⚠ WARNINGS

- Connect the copier to a power source meeting the specifications given on the inside front cover of this manual. Avoid multiwiring.
- Avoid using an extension cord.
- Do not set anything on the power cord.
- Do not plug or unplug the power cord with your hands wet. Otherwise, an electric shock might occur.

- Make sure that the wall outlet is near the copier and easily accessible.

- Do not remove any covers or screws other than those specified in this manual.
- Do not modify or replace any parts other than those specified in this manual.

- When the main switch is in the Stand-by position, the anticondensation heaters are on. In case of emergency, unplug the machine's power cord. Then contact your service representative. Do not keep using the copier with a fault or defect.
- If foreign matter such as metal, water, or liquid falls inside the copier, turn off the main switch (including the backup switch for some copier types) and unplug the power cord from the wall outlet. Then contact your service representative. If you keep using a faulty copier, a fire or electric shock might occur.

- Do not place a vase, flowerpot, glass, receptacle containing water, or metal object on the copier. If the contents fall inside the copier a fire or electric shock might occur.

- Do not incinerate toner or toner containers. Toner dust might ignite when exposed to open flames.

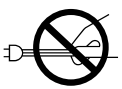
To use your copier safely, the following precautions should always be followed:

⚠ CAUTIONS

- Keep the copier away from humidity and dust. Otherwise, a fire or electric shock might occur.
- The copier must be level within 5 mm, 0.2" both front to rear and left to right.

- After you move the copier, fix it with the caster fixture. Otherwise, the copier might move or fall causing personal injury.

- When you move the copier, unplug the power cord from the wall outlet. Otherwise, the cord might be damaged causing a fire or electric shock.
- When the copier will not be used for a long period, disconnect the power cord.



- To disconnect the power source, the main plug must be pulled out.

- To avoid possible build-up ozone, make sure to locate this copier in a large well ventilated room that has an air turnover of more than 30 m^3/hr/person.

- Do not reuse stapled paper. Do not use aluminum foil, carbon-containing paper or other conductive paper. Otherwise, a fire might occur.

- Since some parts of the copier are supplied with high electrical voltage, touch only the parts specified in this manual otherwise a burn might occur.

- Do not plug or unplug the power cord with your hands wet or an electric shock might occur.

- When you move the copier, be sure to pull out the four knobs from the left and right sides of the body. If you pull the knobs incompletely or hold parts other than the knobs, you might be injured (e.g., your fingers are nipped). When you have moved the copier, return the knobs to the original positions.
- When the copier is equipped with the optional paper tray unit, do not press the top side of the copier excessively. If you do, the paper tray unit might be detached from the copier and you might be injured.

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WHERE IS IT & WHAT IS IT

COPIER EXTERIOR

Platen cover
Presses an original set on the exposure glass (platen glass).

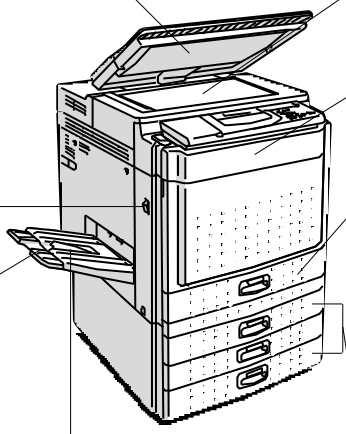
Exposure glass (platen glass)
Fit originals to the rear left corner.

Front cover
Open to remove misfed paper or supply toner.

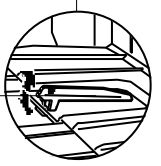
Main switch
Switches copier on/off.

Paper tray
Set paper here. The model with a unit for two-sided copying does not have this tray. Instead, it has the unit for two-sided copying.
or
Unit for two-sided copying
This unit is used to make two-sided copies.

Copy tray
Completed copies are delivered here.

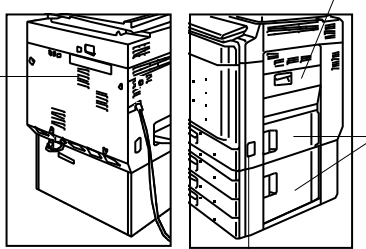


Optional paper tray unit



Stopper
Protects delivered paper from rounding when copying onto thin paper.

Bypass feed table
Used to copy onto post cards, OHP sheets, or thick paper as well as non-standard size paper.
This tray also can be used to copy onto the underside of once-copied paper when your copier is of Basic type.

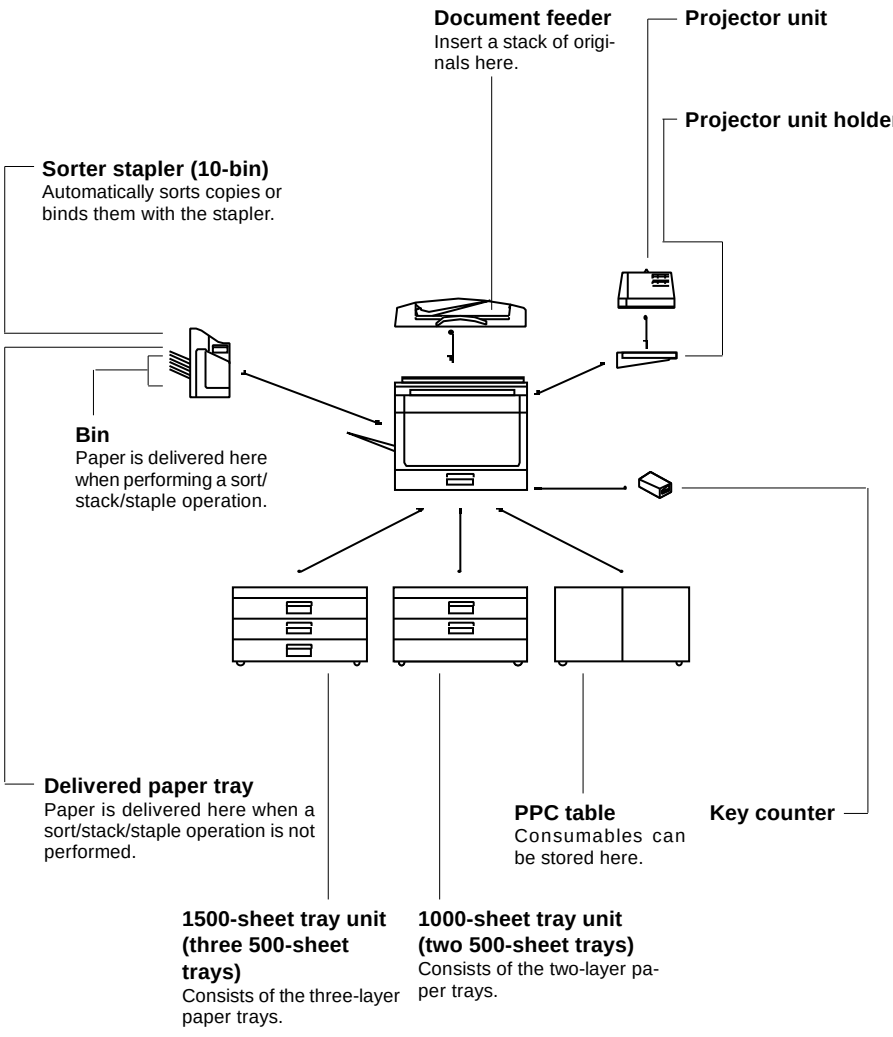


Ventilation hole
Protects the temperature from rising excessively inside the machine.
- Do not obstruct the ventilation hole by placing or leaning an object around the hole. If the temperature rises excessively inside the copier, a fault might occur.

Right side cover
Open to remove misfed paper.

Key counter holder
Set the key counter (option).

OPTIONS

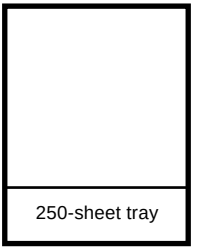

Document feeder
Insert a stack of originals here.
Projector unit
Projector unit holder
Sorter stapler (10-bin)
Automatically sorts copies or binds them with the stapler.
Bin
Paper is delivered here when performing a sort/stack/staple operation.
Delivered paper tray
Paper is delivered here when a sort/stack/staple operation is not performed.
PPC table
Consumables can be stored here.
Key counter
1500-sheet tray unit (three 500-sheet trays)
Consists of the three-layer paper trays.
1000-sheet tray unit (two 500-sheet trays)
Consists of the two-layer paper trays.

❒ For the paper tray unit, any of the 1000-sheet tray unit, 1500-sheet tray unit, and PPC table can be attached.

MODELS

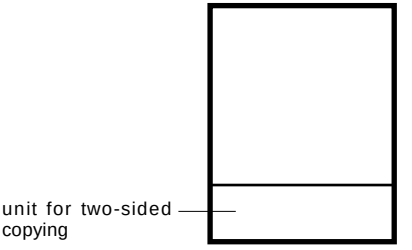
Basic

One 250-sheet tray



With unit for two-sided copying

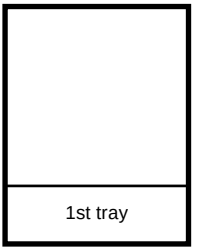
A unit for two-sided copying



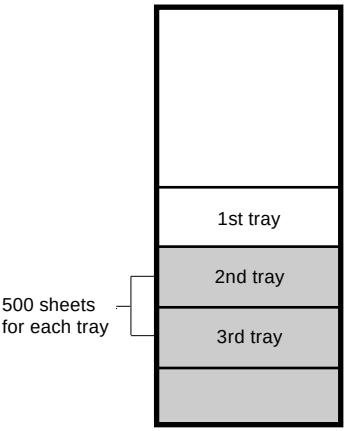
PAPER TRAYS

Each 500-sheet tray's name changes depending on what kind of copier and optional paper tray unit you have. Find your copier below and check the name of your trays and their physical locations.

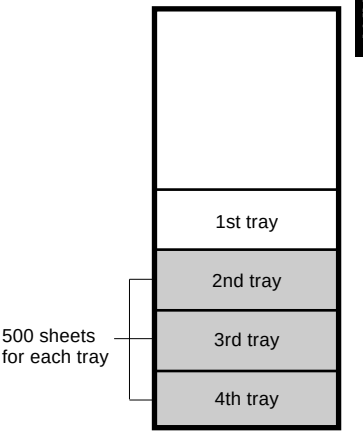
Basic



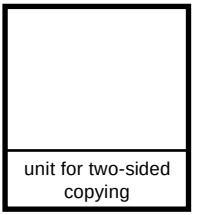
With optional 1000-sheet tray unit



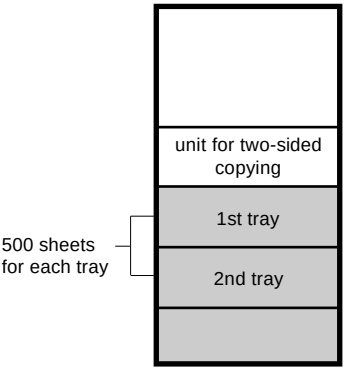
With optional 1500 sheet tray unit



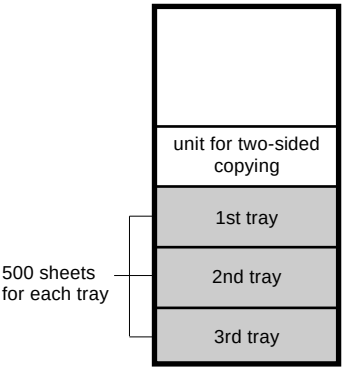
With unit for two-sided copying



With unit for two-sided copying and optional 1000-sheet tray unit



With unit for two-sided copying and optional 1500-sheet tray unit

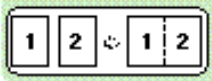


OPERATION PANEL

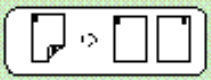
Main Keys: Basic Model

Single Copies Key

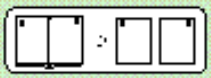
☛ See page 85.



☛ See page 87.



☛ See page 88.



This lamp indicates that a little or no toner remains; it blinks when a little toner remains, and lights when no toner remains.

This section indicates a location having a paper jam or error status. ☛ See page 113".

Auto Reduce/Enlarge Key

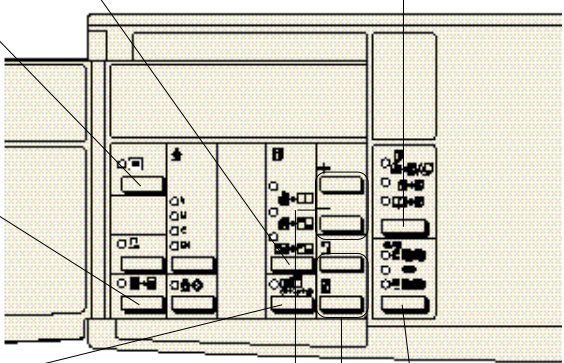
☛ See page 69.

Duplex Side 2 Key

Press to copy onto the underside of once-copied paper with the bypass feed table. ☛ See page 73.

Projector Key

Press to use the projector unit (option). ☛ See page 149.

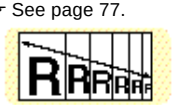


Full Image Key

Automatically reduces a copy to protect an image on the edges of the original from being lost. ☛ See page 56.

Zoom (Number Key + #) Key

☛ See page 77.



+ Up Key

– Down Key

Sets the magnification by percent to enlarge/reduce a copy. ☛ See page 77.

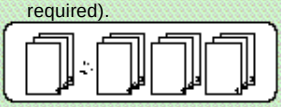
Enlarge Key

Reduce Key

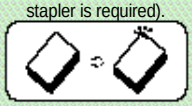
☛ See page 76

Sorter Key

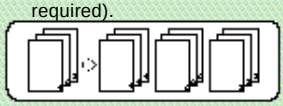
☛ See page 89 (Sorter stapler is required).



☛ See page 90 (Sorter stapler is required).



☛ See page 89 (Sorter stapler is required).



• For the color function keys, ☛ see page 20.

Lighter Key
Darker Key
Auto Image Density Key
Adjusts the copy density.
☛ See page 65.

Original Key
Selects the original type.
☛ See page 67.

Guidance Display
Displays an operation procedure, operation status, error message, etc.
• Refer to these messages to execute operations.

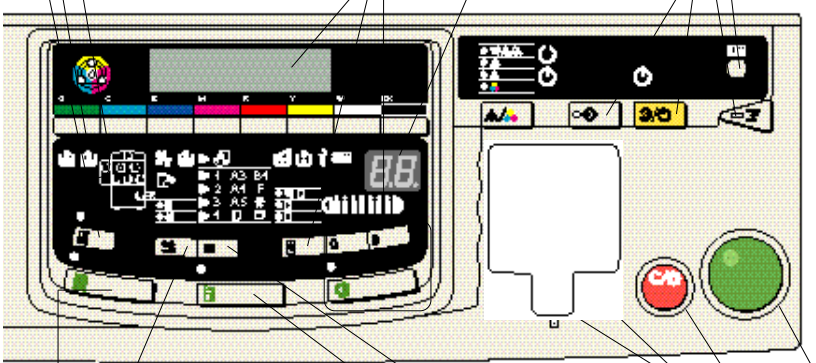
Clear Modes/Stand-by Key
Clear Modes - Cancels the current setting and returns to the state on power-up.
Stand-by - Hold down this key for about a second or more to enter the Stand-by mode. ☛ See page 55.

Program Key
Stores a frequently used setting and recalls it. ☛ See page 93.

This section displays the specified number of copies before a copy operation, and the number of copies made or rest of copies to be made during a copy operation.

Interrupt Key
Interrupts the current copy operation to copy another original.
☛ See page 75.

Counter Key
Displays the total number of copies that have been made up to this time in the guidance display.
• This function displays the number of copies separately for the Full Color and monotone (Single Color/Black) modes. Press any other key to return to the normal display.



Special Paper Key
Press this key to set special paper such as thick paper and OHP sheets for copying onto them from the bypass feed table. ☛ See page 70.

Full Size Key
Makes copies that are the same size as your originals.

Auto Paper Select Key
Automatically selects the paper type that fits the size and magnification of an original.

Paper Selection Key
Press to select the paper size to be used. ☛ See page 68.

Number Keys, . Key
Use to enter a value for the number of copies, magnification, etc.

Recall/Enter Key
Enter - Sets a value or specification.
• Press this key when the guidance display specifies it (e.g., "→ #").

Start Key
Starts a copy operation.

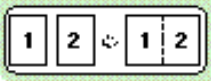
Clear/Stop Key
Clear - Cancels a setting such as the number of copies.
Stop - Stops/cancels a copy operation.

Recall - This key can be used to confirm the specified number of copies during a copy operation or if a copy operation stops halfway.

Basic/Edit Function: With unit for two-sided copying

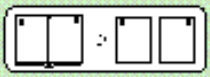
Margin Adjustment Key
☛ See page 81.

Single Copies Key
☛ See page 85.



☛ See page 87.

☛ See page 88.



This lamp indicates that a little or no toner remains; it blinks when a little toner remains, and lights when no toner remains.

This section indicates a location having a paper jam or error status. ☛ See page 113.

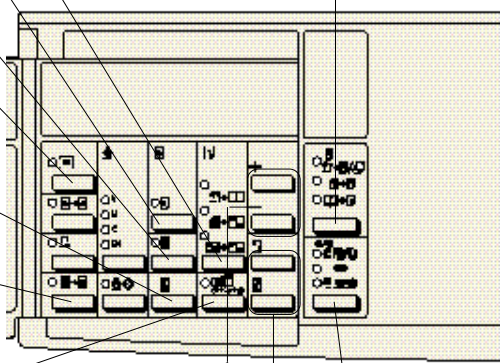
Centering Key
☛ See page 84.

Auto Reduce/Enlarge Key
☛ See page 69.

Duplex Key
Press to select one of Duplex modes.
☛ See page 73.

Projector Key
Press to use the projector unit (option). ☛ See page 149.

Directional Mag. Key
☛ See page 79.



Full Image Key
Automatically reduces a copy to protect an image on the edges of the original from being lost. ☛ See page 56.

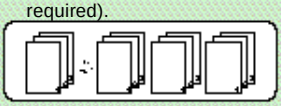
Zoom (Number Key + #) Key
☛ See page 77.

+ Up Key
– Down Key
Sets the magnification by percent to enlarge/reduce a copy. ☛ See page 77.

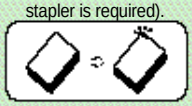
Enlarge Key
Reduce Key
☛ See page 76

Sorter Key

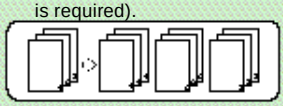
☛ See page 89 (Sorter stapler is required).



☛ See page 90 (Sorter stapler is required).



☛ See page 89 (Sorter stapler is required).



• For the color function keys, ☛ see page 20.

Lighter Key
Darker Key
Auto Image Density Key
Adjusts the copy density.
☛ See page 65.

Original Key
Selects the original type.
☛ See page 67.

Guidance Display
Displays an operation procedure, operation status, error message, etc.
• Refer to these messages to execute operations.

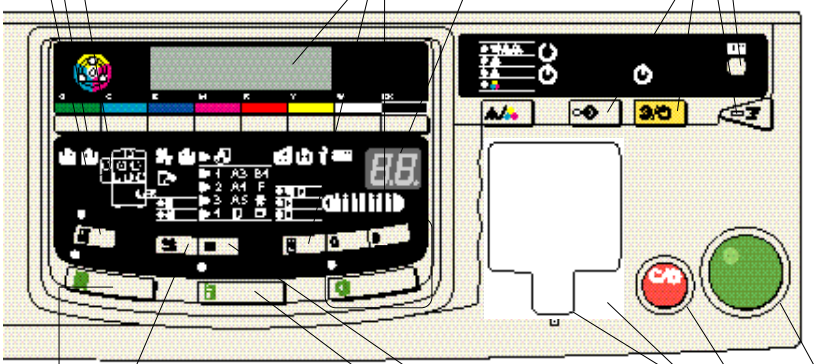
Clear Modes/Stand-by Key
Clear Modes - Cancels the current setting and returns to the state on power-up.
Stand-by - Hold down this key for about a second or more to enter the Stand-by mode. ☛ See page 55.

Program Key
Stores a frequently used setting and recalls it. ☛ See page 93.

This section displays the specified number of copies before a copy operation, and the number of copies made or rest of copies to be made during a copy operation.

Interrupt Key
Interrupts the current copy operation to copy another original.
☛ See page 75.

Counter Key
Displays the total number of copies that have been made up to this time in the guidance display.
• This function displays the number of copies separately for the Full Color and monotone (Single Color/Black) modes. Press any other key to return to the normal display.



Special Paper Key
Press this key to set special paper such as thick paper and OHP sheets for copying onto them from the bypass feed table. ☛ See page 70.

Full Size Key
Makes copies that are the same size as your originals.

Auto Paper Select Key
Automatically selects the paper type that fits the size and magnification of an original.

Paper Selection Key
Press to select the paper size to be used. ☛ See page 68.

Number Keys, . Key
Use to enter a value for the number of copies, magnification, etc.

Recall/Enter Key
Enter - Sets a value or specification.
• Press this key when the liquid crystal display section specifies it (e.g., "→ #").

Start Key
Starts a copy operation.

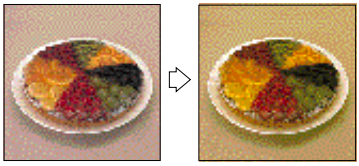
Clear/Stop Key
Clear - Cancels a setting such as the number of copies.
Stop - Stops/cancels a copy operation.

Recall - This key can be used to confirm the specified number of copies during a copy operation or if a copy operation stops halfway.

Color Functions

Color Balance Adjustment Key

Adjusts the overall color tone of a copy. ☛ See page 29.



Color Balance Recall/ Memory Key

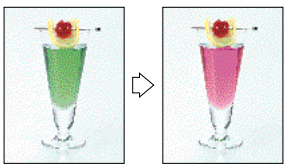
This key can be used to store a color balance adjustment setting and recall it. ☛ See page 31.

Color Keys

Press to select colors for a single color or color conversion.

Color Conversion Key

Copies an original by replacing an original color with another color or removing an original color. ☛ See page 27.



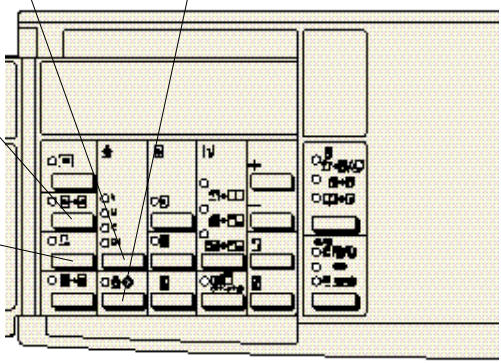
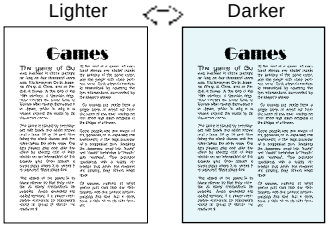


Image Adjustment Key

Press to switch between “Background Density Control,” “Pastel,” “Sharp/Soft,” and “Auto Color Calibration” modes in sequence.

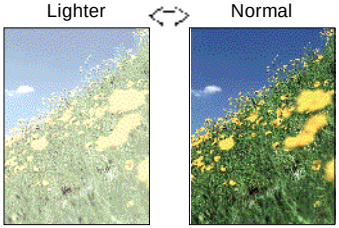
Background Density Control - Adjusts the background density of an image. ☛ See page 33.

Lighter <> Darker



Pastel - Copies an image in lighter (pastel) tones. ☛ See page 35.

Lighter <> Normal



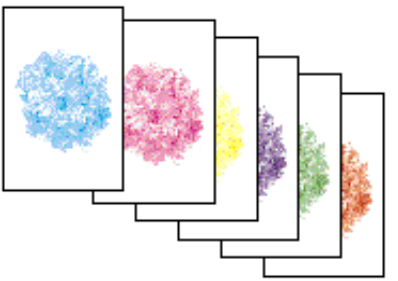
- Color samples are expressed in the print processing mode to clarify the difference between the functions.
  The colors of the copier illustrated below might slightly differ from actual colors of your copier.
- Colors specified by the **Color** keys might slightly differ from those on actual copies.

[ ] ☛ See page 64.

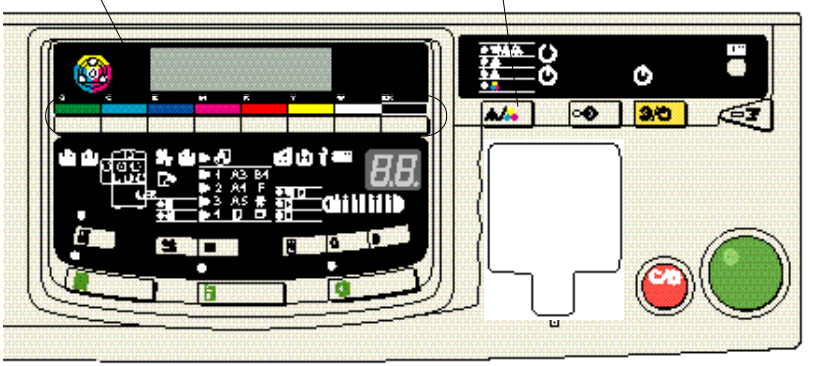
Switches among the “Full Color Copy,” “Single Color,” “Auto Color Select,” and “Black Copy” modes in that order each time you press this key.
Auto Color Select - Automatically detects an original color and makes a copy in full color or black. ☛ See page 64, “Color Selection”.

☛ See page 24.

☛ See page 26.

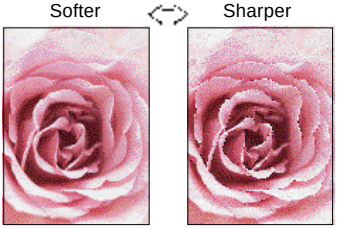


☛ See page 24.



Sharp/Soft - Adjusts the edges of an image.
☛ See page 36.

Softer <> Sharper

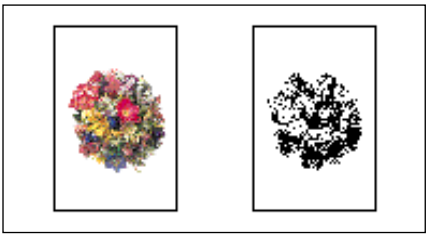


Auto Color Calibration - Use this mode when the balance of the three colors (yellow, magenta, and cyan) is thrown off and a certain color tone is strong in an image.
☛ See page 37.

COLOR FUNCTIONS

FULL COLOR COPY/BLACK COPY

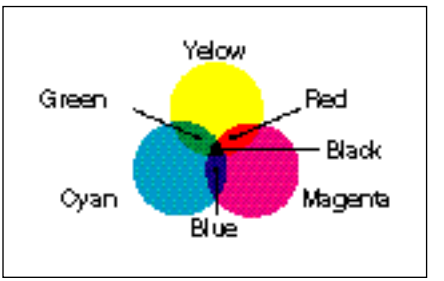
The Full Color Copy function overlays the four colors (yellow, magenta, cyan, and black) to make copies in colors close to those of originals.



The Black Copy function makes copies in black regardless of colors of originals.

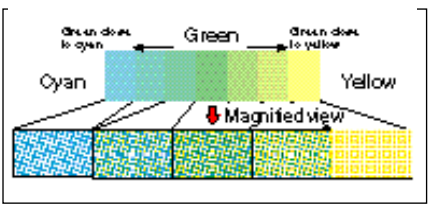
Three fundamental colors

- ❒ Yellow, magenta, and cyan (three fundamental colors) can be combined to express the seven colors shown in the figure below. If yellow, magenta, and cyan are overlaid, black is created. However, this copier uses the black toner to express black because the black made from the three fundamental colors slightly differs from actual black in the strict sense.

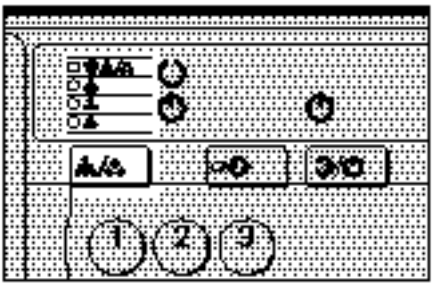


- ❒ This copier adjusts the amount of the yellow, magenta, and cyan toner to express green close to yellow (yellowish green) or cyan (bluish green).

Difference between greens when combining yellow and cyan



1 Press the key to select the Full Color Copy or Black Copy mode.



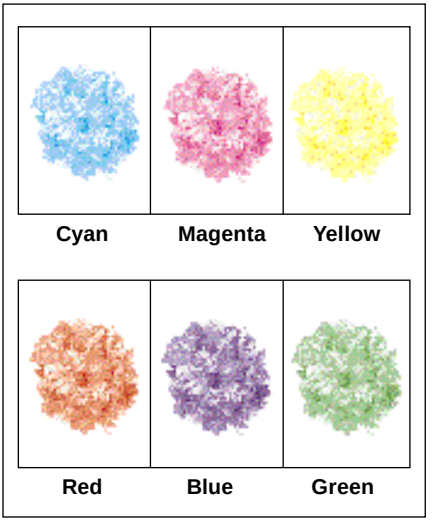
- The "Full Color Copy," "Single Color," "Auto Color Select," and "Black Copy" modes are switched in that order each time you press the key.
- When you do not set any other function, press the **Start** key to start a copy operation.
- You can adjust the overall color tone of a copy or the edges of an image. See "COLOR BALANCE ADJUSTMENT" for the overall color tone of a copy, and "Sharp/Soft" for the edges of an image.

☛ See page 29, "COLOR BALANCE ADJUSTMENT" and page 36, "Sharp/Soft".

SINGLE COLOR

This function makes copies in a specified color. For single color copying, you can choose yellow, red, magenta, blue, cyan, or green.

❒ Although still monochrone, some colors you select may be created with 2 toners. This is because yellow, magenta and cyan are created with a single toner, while red, blue and green use two toners.



1 Press a **Color** key to select a color you want use.

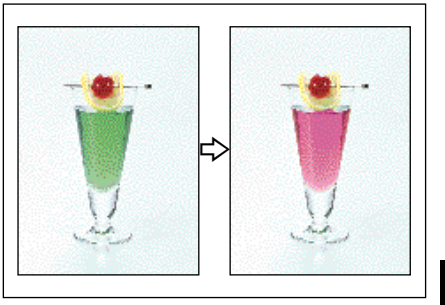
❒ You cannot select the **White** key.

❒ When you do not wish to select any other functions, press the **Start** key to begin copying.

❒ After selecting the “Single Color” mode using the key, you can also use a **Color** key to select a color you want to use.

❒ When you select the **Black** key, the color mode is set to “Black Copy.”

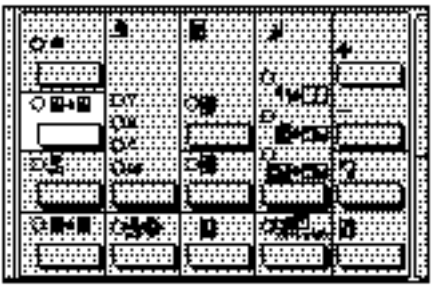
COLOR CONVERSION



Copies an original by replacing a color with another one or removing a color in the original.

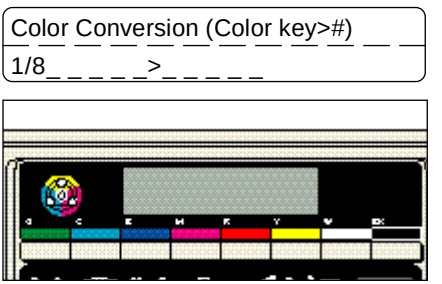
- ❒ This function can be used only if your copier has a unit for two-sided copying.
- ❒ When you specify the Color Conversion function, the color mode is set to "Full Color Copy."
- ❒ You can convert up to eight colors. When you convert eight colors, however, four colors of the eight are changed into "White," resulting in the same as removing these four colors.
- ❒ The color range to be converted can be adjusted within 5 levels. For example, when you specify yellow with the color width set to "Wide," other colors close to yellow, such as orange and yellowish green, are also converted. When you set the color width to "Narrow," only yellow is converted. The color width can be adjusted with the user tools. ☛ See page 104, "USER TOOLS, Color Conversion".
- ❒ You can specify the following eight colors: yellow, magenta, cyan, green, blue, red, white, and black.

1 Press the **Color Conversion** key.



2 Use a **Color** key to select the color you wish to convert (source), and press the **Recall/Enter** key.

- ❒ The selected color is displayed on the guidance display.
- ❒ If you change the selected color, press the **Clear/Stop** key and select another **Color** key.



3 Use a **Color** key to select the color to convert to (final), and press the **Recall/Enter** key.

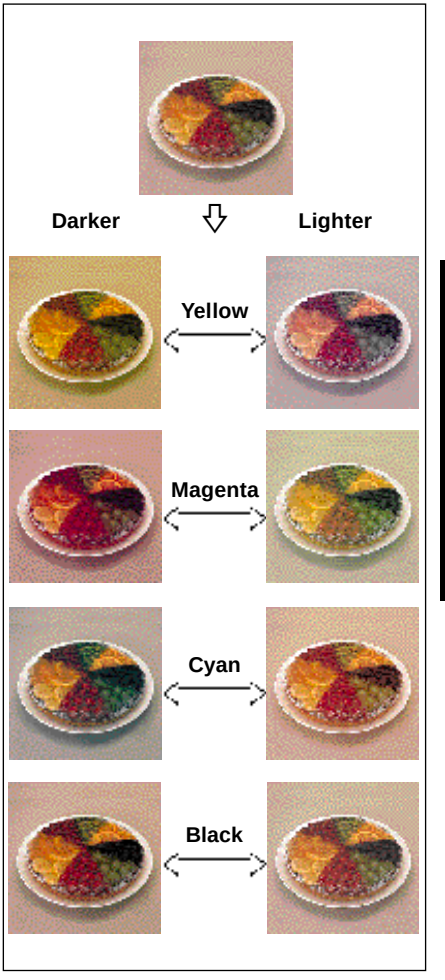
- ❒ When converting two or more colors consecutively, repeat steps **2** and **3** for all target colors.
- ❒ When you specify colors other than “White” for the final color four times consecutively, you can only choose “White” as the final color for the next four selections. In this case, repeat only step **2**.
- ❒ When you press the **– Down** key, the colors specified in steps **2** and **3** are displayed. Press this key repeatedly when you specify two or more colors you have entered. Then all the specified colors are displayed. Press the **+ Up** key to go back to the normal display.

  You can change a color you have programmed, but see the above note about selecting “White”.

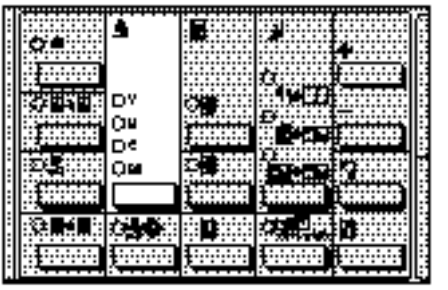
4 Set your originals and press the **Start** key.

COLOR BALANCE ADJUSTMENT

Use this function to adjust the overall color tone of a copy if the copy is entirely reddish or bluish.



1 Use the **Color Balance Adjustment** key to select a color you want to adjust.



❒ The **Color Balance Adjustment** key steps through each color in turn — if you make a mistake, keep pressing it until the color comes round again.

2 Use the **Number** keys to adjust the color tone (1 - 9).

1:Lighter–9:Darker>#
Y:5 M:5 C:5 BK:5

❒ The entered value blinks on the guidance display.

1	Lighter
|	↑
5	|
|	↓
9	Daker

❒ Y, M, C, and BK represent yellow, magenta, cyan, and black, respectively.

3 To adjust another color, press the **Color Balance Adjustment** Key again. To finish, press the **Recall/Enter** key.

❒ The lamp for the color being adjusted blinks during the adjustment operation, and remains on when the color is set to the specified value.

❒ If you wish, you may store this setting in memory for later use. ☛ See page 31, “Color Balance Memory (Change)”.

4 Set your originals and press the **Start** key.

COLOR BALANCE RECALL/MEMORY

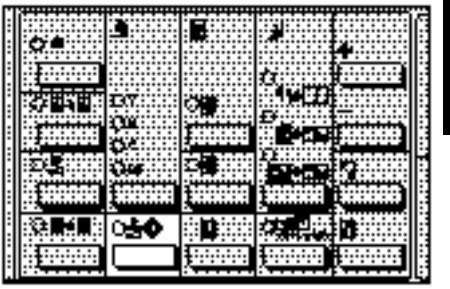
This function can be used to store a color balance adjustment setting into memory and recall it.

Color Balance Memory (Change)

- ❒ You can store only a color balance setting.
- ❒ To change a setting you have stored, store another in its place to overwrite it.
- ❒ You can also store a color balance adjustment setting in the program. ☛ See page 93, “PROGRAM”.

1 Set up the color balance you want to store. ☛ See page 29.

2 Press the **Color Balance Recall/ Memory** key.



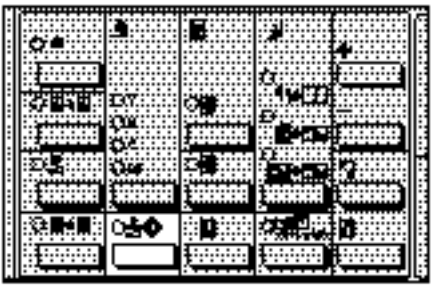
3 Press the **2** key and press the **Recall/Enter** key.

❒ The color balance setting is stored.

Color Balance memory (1–2>#)
1:Recall 2:Store 2

Color Balance Recall

1 Press the **Color Balance Recall/ Memory** key.



2 Check that Item 1 blinks on the guidance display, and press the **Recall/Enter** key.

Color Balance memory (1–2>#) _ _ _ _ _ _ _ _ _ _ _ _ _ _
1:Recall 2:Store 1

3 Set your originals and press the **Start** key.

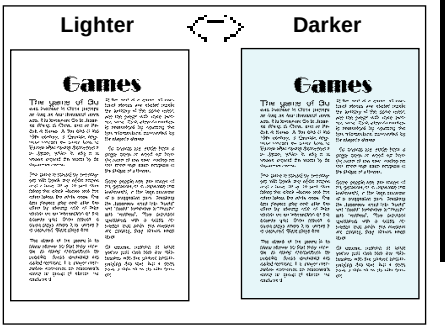
IMAGE ADJUSTMENT

You can adjust the image quality.

- ❒ Image adjustment has the following four modes: “Background Density Control,” “Pastel,” “Sharp/Soft,” and “Auto Color Calibration.” These modes are switched in that order each time you press the **Image Adjustment** key.
- ❒ You can adjust an image separately with each adjustment function. However, one function setting might affect other function levels depending on the adjustment level and color tone.

Background Density Control

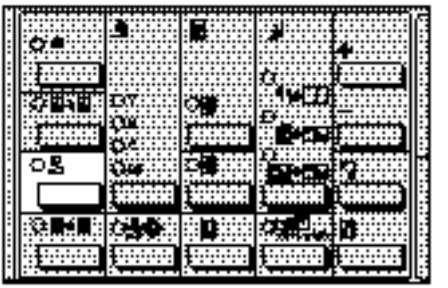
Adjusts the background density of an image.



- ❒ When copying a newspaper or an original with a dark background, adjust the background density to a lighter setting.
- ❒ To darken parts marked with a highlighting pen, adjust the background density to a darker setting. However, originals written with a highlighting pen might be copied in different colors or not be copied for some colors because fluorescent colors are difficult to duplicate.
- ❒ When you set “Background Density Control” mode, “Auto Image Density” mode is cleared.

☛ See page 65, “Image Density Adjustment”.

1 Press the **Image Adjustment** key.



2 Adjust the background density (1 - 9) using the **Number** keys, and press the **Recall/Enter** key.

1	Lighter
|	↑
|	|
|	↓
9	Daker

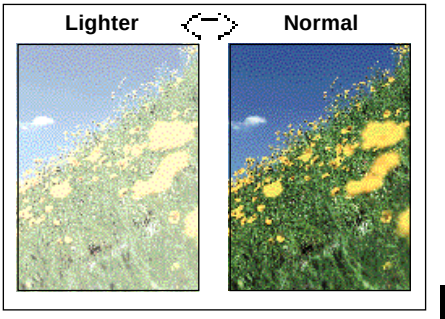
Background Density (1–9>#) _
1:Lighter–9:Darker Level:

❒ To change the entered value, reenter another value before pressing the **Recall/Enter** key.

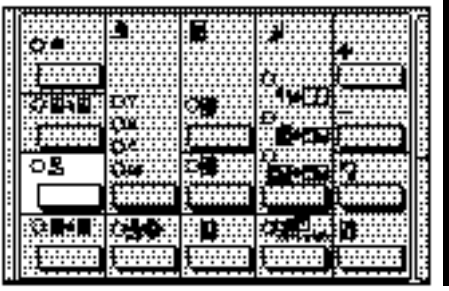
3 Set your originals and press the **Start** key.

Pastel

Copies an image in lighter (pastel) tones.



1 Press the **Image Adjustment** key twice.



2 Adjust the color tone (1 - 9) using the **Number** keys, and press the **Recall/Enter** key.

1	Lighter
|	↑
|	|
|	↓
9	Normal

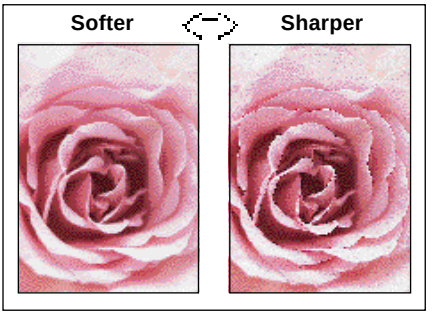
Pastel (1–9>#)
1:Lighter–9:Normal Level:9

❒ To change the entered value, reenter another value before pressing the **Recall/Enter** key.

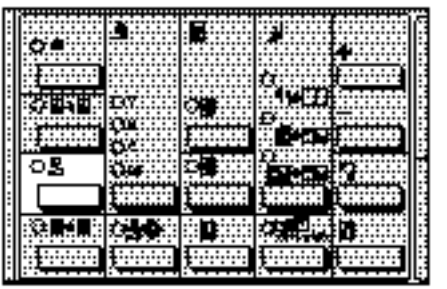
3 Set your originals and press the **Start** key.

Sharp/Soft

Adjusts the edges of an image.



1 Press the **Image Adjustment** key three times.



2 Choose the level (1 - 5) using the **Number** keys, and press the **Recall/Enter** key.

1	Sharper
|	↑
3	|
|	↓
5	Softer

Sharp/Soft (1–5>#)
1:Sharp–5:Soft Level:3

❒ To change the entered value, reenter another value before pressing the **Recall/Enter** key.

3 Set your originals and press the **Start** key.

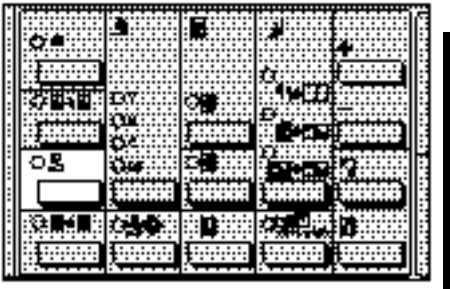
Auto Color Calibration

Use this function if a certain color tone is strong or the density of an image is not duplicated properly.

❒ The Auto Color Calibration function adjusts the balance of the four basic colors (yellow, magenta, cyan, and black) so that their density can be duplicated properly.

❒ When you execute the Auto Color Calibration function, the test pattern is output. However, this does not increase the counter value (total number of copies).

1 Press the **Image Adjustment** key four times.



2 Check that Item 1 blinks on the guidance display, and press the **Recall/Enter** key.

Auto Color Calibrator (1–2>#)
1:Calibrate 2:Reset to previous calibration

❒ To change the entered value, reenter another value before pressing the **Recall/Enter** key.

When restoring the value which was set before executing the Auto Color Calibration function

❶ Enter “2” and press the **Recall/Enter** key.

❷ Check that Item 1 blinks on the guidance display, and press the **Recall/Enter** key.

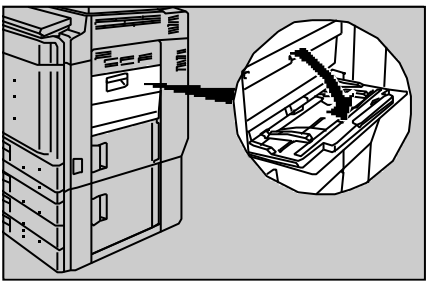
The setting will return to the previous value.

Reset to previous calibration (1–2>#)
1:Yes 2:No

3 Select either the paper tray or bypass feed table, and press the **Recall/Enter** key.

Use bypass tray (1–2>#)
1:Yes 2:No

❒ When you want to copy from the bypass feed table, enter "1." When you want to copy from the paper tray, check that Item 2 blinks on the guidance display.



When you select the bypass feed table

❶ Open the bypass feed table.

❷ Select the paper size (1 - 5) using the **Number** keys, and press the **Recall/Enter** key.

1	A4	4	A3
2	8 1/2" x 11"	5	11" x 17"
3	B4		

4 Set any of A4, B4, A3, 8 1/2" x 11", and 11" x 17" paper, and press the **Start** key.

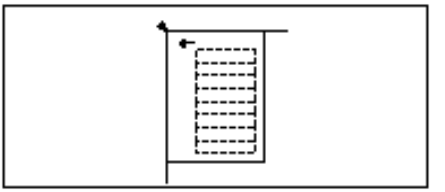
❒ The test pattern is output.

❒ When you use the bypass feed table, set the paper selected in step ❷.

❒ Copy paper weight that can be used are as follows.

Paper Tray	Paper Weight
Copier's 250-sheet tray	64 - 90 g/m^2, 17.1 - 23.9 lb
1500-sheet tray unit or 1000-sheet tray unit or Bypass feed table	64 - 105 g/m^2, 17.1 - 27.9 lb

5 Set the test pattern on the exposure glass (platen glass), and press the **Start** key.



- ❒ The test pattern is not read if you set it in the optional document feeder.
- ❒ Set on the test pattern two or three blank sheets of the same size.

6 Set your originals and press the **Start** key.

BASIC

ORIGINALS

- ❒ If originals contain ink or ink eraser, wait until the originals are completely dry before setting them. If you do not, smudges may appear on the exposure glass and be reproduced on copies.
- ❒ Originals written with a highlighting pen might be copied in different colors or cannot be copied for some colors because fluorescent colors are difficult to duplicate.

Recommended Originals

Metric version

	Original Size	Maximum Number of Originals	Original Weight
When you set an original on the exposure glass (platen glass)	A3 (297 x 420 mm) or smaller	—	—
When you set originals in the optional document feeder	One-sided to one-sided copy: A3 - B6	50	52~128g/m^2
	Two-sided to one-sided copy: A3 - A5	50	52~105g/m^2
	Thin Paper mode: A3 - B6	50	40~52g/m^2

Inch version

	Original Size	Maximum Number of Originals	Original Weight
When you set an original on the exposure glass (platen glass)	11" x 17" or smaller	—	—
When you set originals in the optional document feeder	One-sided to one-sided copy: 11" x 17" - 5^1/$_2$" x 8^1/$_2$"	50	13.8~34.0lb
	Two-sided to one-sided copy: 11" x 17" - 5^1/$_2$" x 8^1/$_2$"	50	13.8~27.9lb
	Thin Paper mode: 11" x 17" - 5^1/$_2$" x 8^1/$_2$"	50	10.7~13.8lb

Non-recommended Originals For The Optional Document Feeder

❒ If you set the following originals in the optional document feeder, a paper jam might occur or the originals might be damaged. Set them on the exposure glass (platen glass).

- Originals other than the following sizes:
  Metric version: A3□, B4□, A4□□, B5□□, A5□□, B6□□, 11" x 17"□, *8½" x 13"□, *8¼" x 13"□, *8" x 13"□, 8½" x 11"□□
  Inch version: 11" x 17"□, 11" x 15"□, 10" x 14"□, 8½" x 14"□, *8½" x 13"□, *8¼" x 13"□, *8" x 13"□, 8½" x 11"□□, 8" x 10"□, 5½" x 8½"□□, A4□□
- Paper with any kind of coating, such as thermosensitive paper, art paper, aluminum foil, carbon paper, and conductive paper
- Indexed or tagged originals
- Non-smooth paper such as tracing paper (transparencies)
- Thin originals that have low stiffness
- Stapled or clipped originals
- Perforated or torn originals
- Bent, folded, or creased originals
- Pasted originals
- Thick originals such as books
- Thin originals

❒ When setting a thin original (40 - 52 g/m², 10.7 - 13.8 lb) in the optional document feeder, you can adjust the optional document feeder so that the original will not be damaged. See “USER TOOLS, ADF: Thin paper mode” on page 111.

* You can use one of the 8½" x 13", 8¼" x 13", and 8" x 13" originals if you contact your service representative.

Original Sizes Difficult to Detect

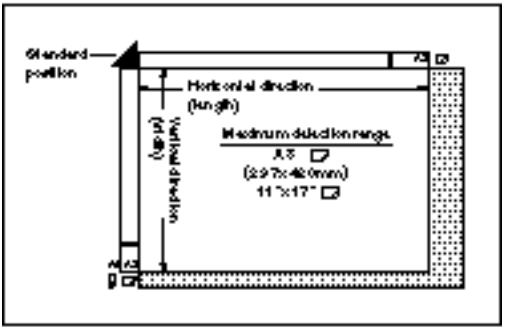
❒ In Auto Paper Select mode, the correct size of paper might not be selected because the sizes of the following originals are difficult to detect. Select paper manually for these originals.

- Indexed or tagged originals
- OHP or other transparencies
- Originals containing solid color
- Originals with solid color on their edges
- Entirely blackish originals having a lot of text or patterns
- When you set an original on the exposure glass (platen glass), originals others than the following sizes:
  Metric version: A3□, B4□, A4□□, B5□□, A5□, *8½" x 13"□, *8¼" x 13"□, *8" x 13"□
  Inch version: 11" x 17"□, 10" x 14"□, 8½" x 14"□, 8½" x 13"□, 8" x 13"□, 8½" x 11"□□, 5½ x 8½"□□

- The following sizes cannot be detected on the exposure glass (platen glass). Set originals of the following sizes in the optional document feeder.
  Metric version: B6, 11" x 15", 8" x 13", 8 1/2" x 11"
  Inch version: 11" x 15", 8" x 10"

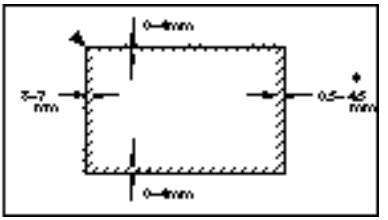
* You can use one of the 8 1/2" x 13", 8 1/4" x 13", and 8" x 13" originals if you contact your service representative.

Original Sizes and Detection Range



Exposure Glass (platen glass) Surface

❒ As shown in the figure below, part of paper edges are not copied. To copy the original entirely, specify the “Full Image” mode to reduce the copy automatically.



☛ See page 56, “Full Image”.

* This width is 4 to 8 mm when you press the **Duplex Side 2** key, **Duplex** key or specify “Thick paper” with the **Special Paper** key.

PAPER

Recommended Paper Sizes and Types

❒ Post cards can be set in the bypass feed table. However, reply cards must not be folded.

❒ The paper sizes, quantity, and types that can be set in each tray are shown below.

❒ When you set paper in the bypass feed table and make copies in full color, use paper of 64 g/m², 17.1 lb or larger.

Metric version

	Paper Size	Maximum Number of Sheets	Paper Weight and Types
Copier's paper tray * Note 1 * Note 2	A3□, A4▯□, A5▯, 11" x 17"□, 8½ x 13"□, B4□, B5▯□, 8½" x 11"▯□	250	64 ~ 90 g/m²
1500-sheet or 1000-sheet paper tray unit * Note 3	A3□, B4□, A4▯□, B5▯□, A5▯, 11" x 17"□, 8½" x 11"▯□, 5½" x 8½"▯, 8" x 13"□, 8½" x 13"□, 8¼" x 13"□, 8" x 10"□, 267 x 389mm, 195 x 267mm	500	52 ~ 105 g/m²
Bypass feed table * Note 4	Vertical: 100 ~ 297mm Horizontal: 140 ~ 432mm Standard size A3□, B4□, A4▯□, B5▯□, A5▯□, B6□, 11" x 17"□, 8½" x 14"□, 8½" x 11"▯	40	52 ~ 90 g/m²
		20	90 ~ 157 g/m² • OHP transparencies • Postcards

* **Note 1:** When using 11" x 17"□, 8½" x 14"□, 5½" x 8½"▯, or 8" x 10"□ size paper, you must specify these paper sizes manually. ☛ See page 107, "USER TOOLS, Paper size set".
Some functions (e.g., auto paper select and preset paper magnification) cannot be used for this tray.

* **Note 2:** If you want to use 8½" x 13" or 8¼" x 13" paper, contact your service representative. If you use these types of paper actually, set the paper size selector to 11" x 17"□.

* **Note 3:** When setting paper in the optional paper tray unit, you must specify the paper size manually. ☛ See page 107, "USER TOOLS, Paper size set".

* **Note 4:** When setting non-standard paper sizes (100 ~ 297 mm long, 140 ~ 432 mm wide), you must specify the size manually. ☛ See page 107, "USER TOOLS, Special paper size set".
Although adhesive label belongs to the "Thick Paper" type, do not specify the "Thick Paper" mode when you use it.

Inch version

	Paper Size	Maximum Number of Sheets	Paper Weight and Types
Copier's paper tray * Note 5 * Note 6	11" x 17"□, 8½" x 14"□, 8½" x 11"□□, 5½" x 8½"□, 11" x 15"□, 10" x 14"□, 8" x 10"□	250	17.1 ~ 23.9 lb
1500-sheet or 1000-sheet paper tray unit * Note 7	A3□, B4□, A4□□, A5□, 11" x 17"□, 8½" x 14"□, 8½" x 11"□□, 5½" x 8½"□, 8" x 13"□, 8½" x 13"□, 8¼" x 13"□, 11" x 15"□, 10" x 14"□, 8" x 10½"□, 8" x 10"□	500	13.9 ~ 27.9 lb
Bypass feed table * Note 8	Vertical: 4.0" ~ 11.6" Horizontal: 5.5" ~ 17.0" Standard size 11" x 17"□, 8½" x 11"□□, 5½" x 8½"□□, 8" x 13"□	40	13.9 ~ 23.9 lb
		20	24.0 ~ 41.7 lb • OHP transparencies • Postcards

* **Note 5:** When using B4□, 11" x 15"□, 10" x 14"□, 8" x 10½"□, or 8" x 10"□ size paper, you must specify these paper sizes manually. ☛ See page 107, "USER TOOLS, Paper size set".
Some functions (e.g., auto paper select and preset paper magnification) cannot be used for this tray.

* **Note 6:** If you want to use 8½" x 13" or 8" x 13" paper, contact your service representative. If you use these types of paper actually, set the paper size selector to B4.

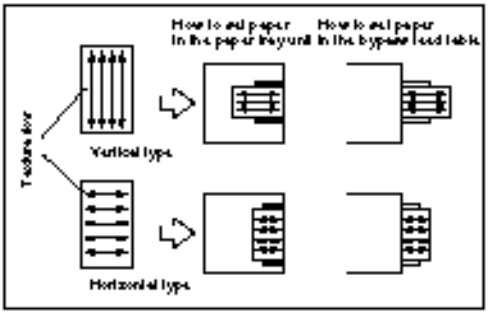
* **Note 7:** When setting paper in the optional paper tray unit, you must specify the paper size manually. ☛ See page 107, "USER TOOLS, Paper size set".

* **Note 8:** When setting non-standard paper sizes (4.0" ~ 11.6" long, 5.5" ~ 17.0" wide), you must specify the size manually. ☛ See page 107, "USER TOOLS, Special paper size set".
Although adhesive label belongs to the "Thick Paper" type, do not specify the "Thick Paper" mode when you use it.

❒ If you have two or more trays with the same size paper, the copier can be programmed to use the other trays when paper runs out. See page 106, “USER TOOLS, Auto Tray Shift”. This saves interrupting a copy run to replenish paper. Note that if you choose the Remarked Paper setting (USER TOOLS, Remarked Paper, see page 108), you must specify the same setting for the other trays.

Setting paper in the portrait direction (Single-sided)

❒ When setting paper thinner than 64 g/m^2, 17.1 lb in the 1500-sheet or 1000-sheet tray unit or bypass feed table, set it as shown in the figure below. Thin paper is divided into the vertical and horizontal types depending on the texture flow direction. If you set thin paper in the reverse direction, a paper jam might occur. Since A3, B4, 11" x 17", and 8^1/$_2$" x 14" sizes of thin paper are set in the lengthwise direction in this copier, they must be of the vertical type.



Set paper in the bypass feed table in the reverse direction to that above when you make two-sided copies; set in the sidewise direction paper of which texture flow direction is vertical and in the lengthwise direction paper of which texture flow direction is horizontal.

Non-recommended Paper

⚠ *Caution*

- Do not use stapled paper, aluminum foil, carbon paper, or other conductive paper. Otherwise, a fire might occur.

Do not set the following paper. Otherwise, a paper jam might occur.

- Bent, folded, or creased paper
- Torn paper
- Slippery paper
- Perforated paper
- Non-smooth paper
- Thin paper that has low stiffness
- Thin, easy-to-bend paper such as tracing paper (transparencies).
- Paper that has been already copied on by another types of copier.

❒ Copies might be blurred if you copy onto coarse paper.

❒ Do not use paper with any kind of coating, such as thermosensitive paper, art paper, aluminum foil, carbon paper, and conductive paper. Otherwise, a malfunction might occur.

Important

❒ Do not set in the paper tray paper that has been copied on one side. Otherwise, a paper jam might occur. However, you can use the **Duplex Side 2** key to copy onto the underside of paper that has been copied on by the Basic type copier. ☞ See page 70, “COPYING FROM THE BYPASS FEED TABLE”.

Important

❒ Do not copy onto the side of paper which you have already copied onto. Otherwise, a fault might occur.

Paper Storage

❒ When storing paper, the following precautions should always be followed:
- Keep paper away from direct sunlight.
- Store in a dry location (humidity: 70 % or less).
- Store on a flat surface.

❒ After you unpack the container of paper, store the paper in a polyvinyl bag to avoid humidity.

Important

❒ If you use damp, bent paper, a stapler needle or paper jam might occur. In this case, set the paper upside down.

Paper Loading

❒ See page 118, “ IS LIT: LOADING PAPER”.

❒ See page 50, “CHANGING PAPER SIZE”.

TONER

"Toner" is powder ink used for copying.

Handling Toner

⚠ ***Warning***

- Do not incinerate the used toner containers. Toner dust might ignite when exposed to open flame.
  Dispose of the used toner containers according to local regulations.

⚠ *Caution*

- If you use a wrong type of toner, a fault might occur.

Toner Storage

When storing toner, the following precautions should always be followed:

❒ Store toner containers vertically in a cool, dark place.

❒ Do not store toner where it will be exposed to heat.

❒ Do not eat or swallow toner, and keep it out of reach of children.

How To Add Toner

❒ ☛ See page 119, "IS LIT OR BLINKING: ADDING TONER".

Used Toner

❒ You cannot reuse once-used toner.

❒ Dispose of the used toner containers according to local regulations.

CHANGING PAPER SIZE

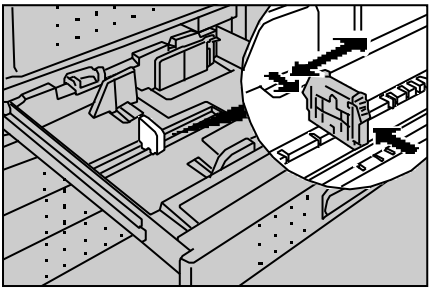
Changing Paper Size For Copier's 250-sheet Tray

❒ For the paper sizes and types that can be set, see "PAPER" on page 45.

1. Check that the target paper tray is not feeding paper, and pull the tray out until it stops.

❒ Remove any remaining paper.

2. Set the left guide to the paper size you want to use.

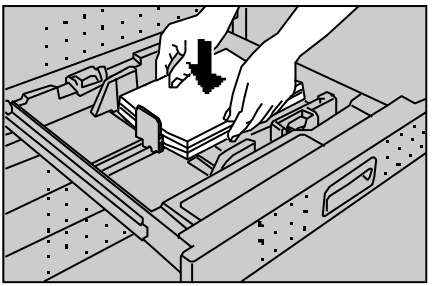


3. Square the paper and set it in the tray.

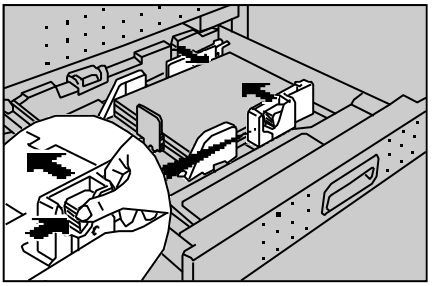
Important

❒ Do not stack paper over the limit mark.

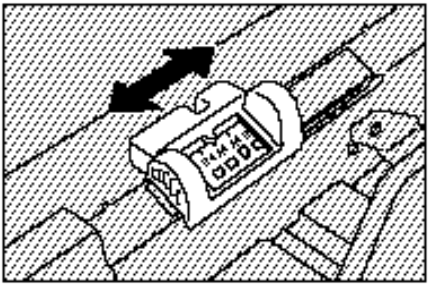
❒ Shuffle the paper before setting it in the tray.



4 While pressing the release levers on the front and rear guides, slide the front and rear guides to the paper size you want to use.



5 Select the paper size by adjusting the paper size selector on the back side of the tray.



Important

❒ If the paper size indicated in the selector differs from the actual size, not only an incorrect paper size detection but also a paper jam might occur.

6 Push the tray in until it stops, and check that the **Start** key turns green.

❒ The paper size and direction you have set are lit.

Changing Paper Size For Optional Paper Tray Unit

❒ For the paper sizes and types that can be set, ☛ see page 45 “PAPER”.

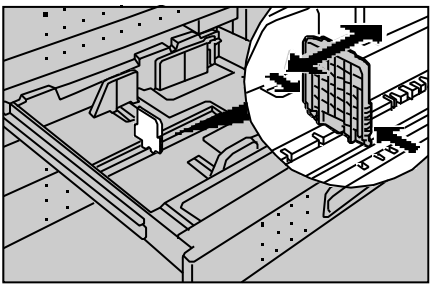
Important

❒ When setting paper in the optional paper tray unit, you must specify the paper size manually. Otherwise, not only an incorrect paper size detection but also a paper jam might occur.

1 Check that the target paper tray is not feeding paper, and pull the tray out until it stops.

❒ Remove any remaining paper.

2 Set the left guide to the paper size you want to use.

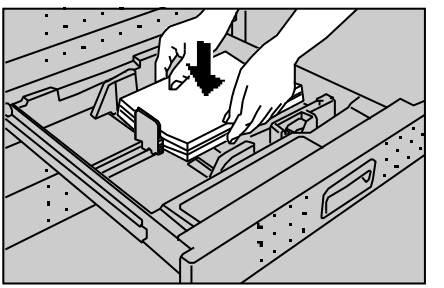


3 Square the paper and set it in the tray.

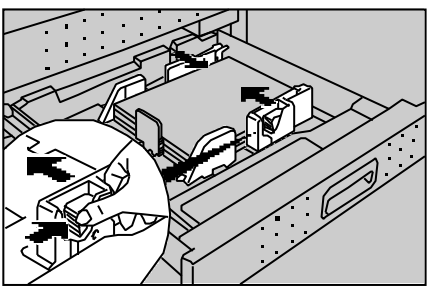
Important

❒ Do not stack paper over the limit mark.

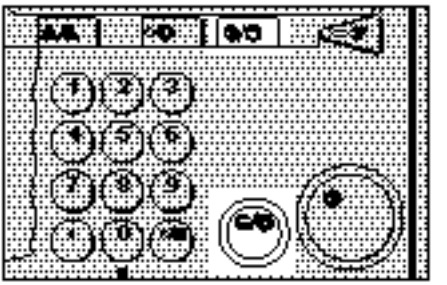
❒ Shuffle the paper before setting it in the tray.



4 While pressing the release lever on the front guide, slide the front and rear guides to paper size you want to use.



5 Specify the paper size with the "user tools." Press the **Clear Modes/Stand-by** key and then press the **Clear/Stop** key for three seconds or more.



6 Enter "3" using the **Number** key and press the **Recall/Enter** key.

❒ The item "[3] Paper Tray Condition" appears on the guidance display.

User Tools (+/–/1–7>#)
[1]Default Image Settings

7 Enter "3" using the **Number** key and press the **Recall/Enter** key.

❒ The item "Paper Size Selection" appears on the guidance display.

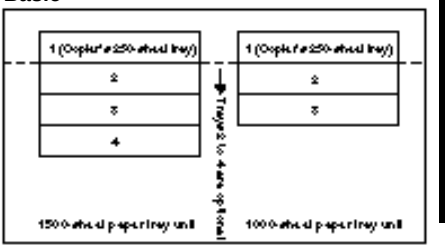
[3]Paper Tray Settings (+/–/1-5>#)
No.1:Auto Tray Shift

8 Select the paper tray (1 - 4) using the **Number** keys, and press the **Recall/Enter** key.

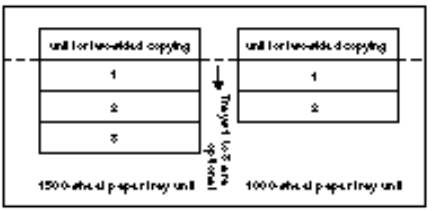
1	Tray 1
2	Tray 2
3	Tray 3
4	Tray 4

Paper Size Selection (2–4>#)
End># Tray:_

Basic



With unit for two-sided copying



❶ Select the paper direction (1:▭, 2:▯) using the **Number** keys, and press the **Recall/Enter** key.

❷ Select "Common" or "Special" using the **Number** keys, and press the **Recall/Enter** key.

❸ Select the paper size using the **Number** keys, and press the **Recall/Enter** key.
The initial settings have been changed.

Tray2:Paper Direction (1–2>#)
1:▭ 2: ▯

Metric Version

"Common" ▭

1	A3
2	B4
3	A4
4	B5
5	11" x 17"
6	8 1/2" x 11"

"Special" ▭

1	8" x 13"
2	8 1/2" x 13"
3	8 1/4" x 13"
4	8" x 10"

▯

1	A4
2	B5
3	A5
4	8 1/2" x 11"
5	8 1/2" x 5 1/2"

Inch Version

"Common" ▭

1	11" x 17"
2	8 1/2" x 14"
3	8 1/2" x 11"
4	8" x 13"
5	11" x 15"
6	10" x 14"
7	8" x 10 1/2"
8	8" x 10"

"Special" ▭

1	A3
2	B4
3	A4
4	8 1/2" x 11"
5	8 1/2" x 5 1/2"

▯

1	A4
2	A5
3	8 1/2" x 11"
4	8 1/2" x 5 1/2"

9 Press the **Clear Modes/Stand-by** key.

❒ Now you can make a copy.

10 Push the tray in until it stops, and check that the **Start** key turns green.

❒ The paper size and direction you have set are lit.

USEFUL FUNCTIONS

Stand-by

The copier turns off the display and enters the Stand-by mode when you do not use it with the power on for a certain period of time or press the **Clear Modes/Stand-by** key for about three seconds or more. This saves the power consumption of the copier. The Stand-by mode can be cleared by pressing the **Clear Modes/Stand-by** key again.

❒ If you press the **Clear Modes/Stand-by** key while you are setting a value or function, all the settings you are specifying are canceled.

❒ ☛ See page 108, “USER TOOLS, Auto reset time set”.

❒ ☛ See page 108, “USER TOOLS, Auto energy saver time”.

Interrupt Copy

When you press the **Interrupt** key, you can interrupt the current copy run to copy another original. After interrupt copying is completed, press the **Interrupt** key again to recall the previous copy settings.

❒ For the operational procedure, ☛ see page 75, “INTERRUPT COPYING”.

Auto Start

When you specify copy settings and press the **Start** key during the warm-up period, the copier will start the copy operation automatically when the copier enters the ready condition.

❒ The Auto Start mode can be cleared by pressing the **Clear Modes/Stand-by** key or **Clear/Stop** key.

❒ When you set the Auto Start mode, the **Start** key blinks.

User Code

You can specify user codes to allow only specific people to use the copier or to manage the number of copies each section makes. For setting a user code, see "CHANGING THE COPIER'S SETTINGS." ☛ See page 109, "USER TOOLS, Set user code(s)" and "USER TOOLS, User code register".

❒ As soon as the copier powers up or after copy settings are automatically cleared, the copier enters a secure state you must enter your user code to operate the copier.

❒ If you have programmed different user codes for different color modes, make sure you are in the correct mode and are using the right code.

❒ To forcibly enable the copier to accept the user code, press the **Clear/Stop** key while pressing the **Clear Modes/Stand-by** key.

Program

When there are frequently used copy operations, you can store settings in a program for quick access.
For details on storing, changing, and recalling copy settings, ☛ see page 93, "PROGRAM".

❒ Unless you store another setting, the stored settings are not cleared even when you turn off the power or press the **Clear Modes/Stand-by** key.

Full Image

If an original has an image extending to its edges, this function can be used to automatically reduce a copy so that the part on the edges will not be lost. When you press the **Full Image** key and then press the **Start** key, the copy reduction ratio is displayed on the guidance display.

COPYING

BASIC OPERATION

This chapter describes the basic operation for copying originals.

❒ Before you start, press the **Clear Modes/Stand-by** key to clear the previous settings.

If user codes are turned on:

❶ Enter the user code (6 digits or less) using the **Number** keys, and press the **Recall/Enter** key.

The copier enters the ready condition.

Input user code (Number key>#)
Code:____

1 Set your originals.

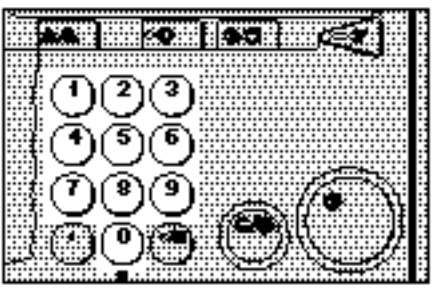
2 Specify the basic functions (color selection, image density adjustment, original image type selection, copy paper selection, and auto reduce/enlarge).

❒ If you do not specify your settings, copy operations are performed in the copier's default settings shown below:

Full color copy, Auto Image Density, Auto (Photo/Letter) mode, Auto Paper Select, and Full Size

3 Enter the number of copies using the **Number** keys.

❒ If you enter a wrong value, press the **Clear/Stop** key and reenter a correct value.



4 Press the **Start** key.

- ❒ The copier starts the copy run.
- ❒ To temporarily stop the copy run, press the **Clear/Stop** key once. To cancel the copy run, press the **Clear/Stop** key twice. When you press the **Clear/Stop** key twice, the entered copy number is also cleared.
- ❒ To reset the copier to the initial condition, press the **Clear Modes/Stand-by** key.
- ❒ You can change the copier's settings for the basic functions. ☛ See page 103, "User Tool Menu"
- ❒ The copier resets itself if you do not use it for a certain period of time after the last copy run. This function is called "Auto Reset."
  - Changing the time after which the copier resets itself ☛ See page 108, "USER TOOL, Auto reset time set"
  - Specifying whether the copier enters the Stand-by mode at the same time as the Auto Reset function is executed ☛ see page 108, "USER TOOLS, "Stand-by mode after auto reset"
  - The Auto Reset function might not be executed in the following cases:

    When there are originals still left.
    When a copy remains in the sorter stapler bin.

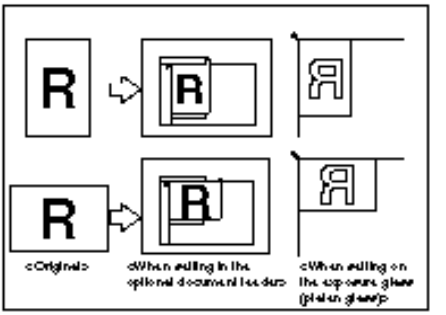
SETTING ORIGINALS

Set your originals on the exposure glass (platen glass) or optional document feeder. Set them properly based on the original type and copy operation.

❒ For cautions about originals, see “ORIGINALS.” ☛ See page 42.

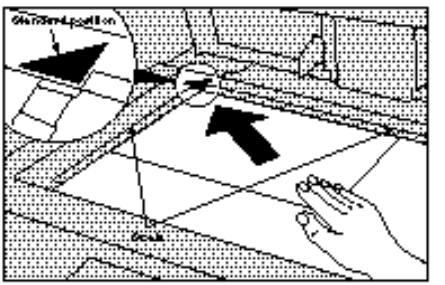
❒ Align the top of an original to the scale on the rear side.

❒ When setting an original, different methods must be used depending on the original type and selected function. Some functions might output different copy results depending on the original direction. See function descriptions for details.



Setting originals on the exposure glass (platen glass)

1 Lift the platen cover or the optional document feeder. Set the original face down on the exposure glass (platen glass). The original should be aligned to the rear left corner.



2 Lower the platen cover or the optional document feeder.

Setting originals in the optional document feeder

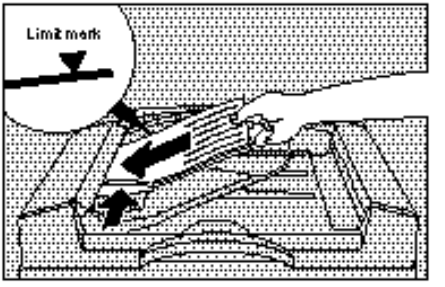
For original sizes and feeder capacity, see “ORIGINALS.” ☛ See page 42.

❒ Do not stack originals above the limit mark.

❒ When copying thin originals, set them sheet by sheet in the optional document feeder so that they will not be damaged by a multi-sheet feed (several sheets are fed simultaneously).

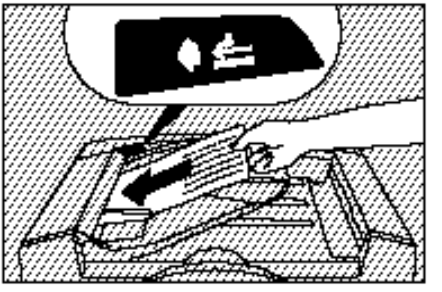
❒ When setting thin originals (40 - 52 g/m^2, 10.7 - 13.8 lb), you must change the copier’s settings. ☛ See page 111, “USER TOOLS, ADF: Thin paper mode”.

When setting two or more originals in the optional document feeder



1. Adjust the guide to the original size. Tap the originals and set them face up into the optional document feeder.

When setting one original at a time in the optional document feeder



1. Set an original in the optional document feeder and then set the next one while the Auto Feed indicator is lit.

   After the second one, the originals are fed automatically without pressing the **Start** key.

When setting different size originals in the optional document feeder

❒ Before you start, you must change the copier's settings. ☛ See page 112, "USER TOOLS, ADF: Different sized originals feeding".

❒ The original thickness that can be set is 52 to 80 g/m^2, 13.8 to 21.2 lb.

❒ It takes more time to perform this operation because the original size is detected for each sheet.

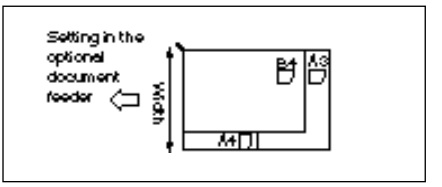
❒ Small originals might be copied in a slanting direction because the guide cannot be adjusted to their sizes.

1 Set the original so that the left and rear edges match the scale.

Important

❒ When setting different width originals, set the wider original under the narrower one.

❒ If you set them in a wrong order, their sizes are not detected properly.

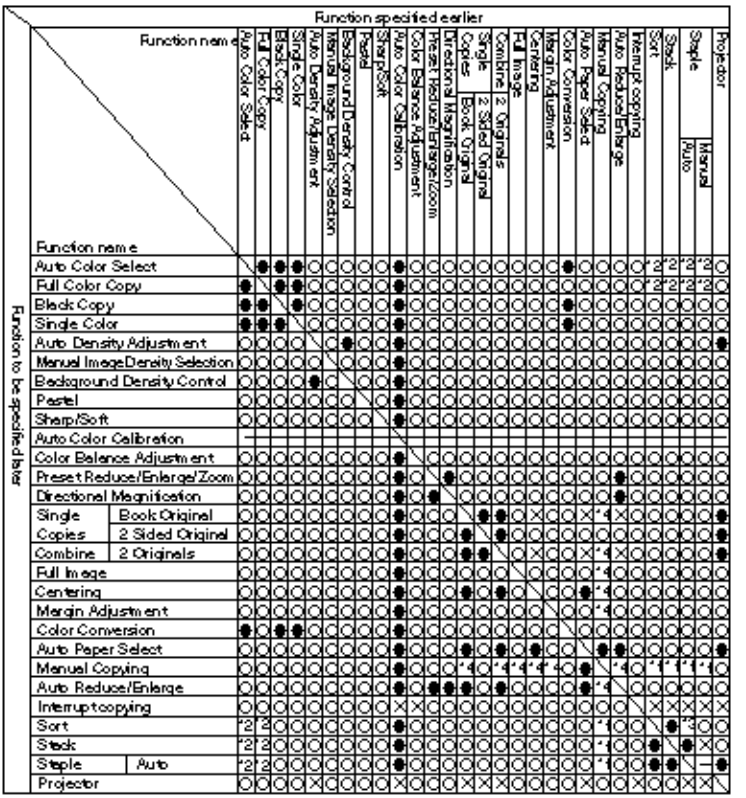


2 Adjust the guide to the larger original size. Set the originals face up in the optional document feeder.

FUNCTION COMBINATION CHART

○: Combinable
×: Not combinable (A function specified earlier has the priority.)
●: Not combinable (A function to be specified later has the priority.)

The available function combinations are shown below.



❒ When you execute the Auto Color Calibration function, all specified functions are cleared.

❒ *1 These functions cannot be combined when OHP sheets, thick paper, or non-standard size (out of standard) paper is used.

❒ *2 These functions cannot be combined if the state “SORTER: Color copy storing prohibition” is specified with the user tool.

❒ *3 The “Staple (Auto)” function is specified as the function to be specified later and the Sort function is also executed automatically.

❒ *4 These functions cannot be combined if non-standard (out of standard) paper is used.

BASIC FUNCTIONS

This section describes the basic functions and their settings.

❒ The basic functions are as follows.

- ■ "Color Selection"
  — Auto Color Select, Black Copy, Full Color Copy, Single Color
- ■ "Image Density Adjustment"
  — Auto Image Density, Manual Image Density Selection, Combined Auto & Manual Image Density Selection
- ■ "Original Image Type Selection"
  — Auto (Photo/Letter) mode, Letter mode, Photo mode
- ■ "Copy Paper Selection"
  — Auto Paper Select, Manual Paper Select, Bypass Feed Select
- ■ "Full Size," "Auto Reduce/Enlarge"

❒ You can change the copier's settings for these functions. Use the pertinent user tools (see "CHANGING THE COPIER'S SETTINGS).

"Color mode" ☛ See page 108.

"Copier's settings for original image type selection" ☛ See page 108.

"APS priority selection" ☛ See page 108.

Color Selection

This function selects colors to be copied based on the original type and purpose of copies.

❒ The color mode is divided into the following four types:

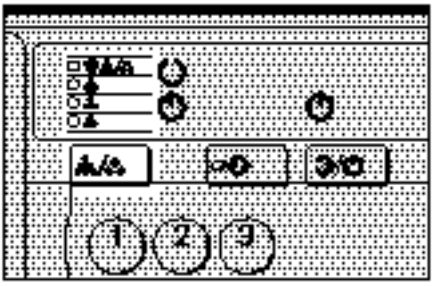
"Auto Color Select"
Automatically detects colors of an original and makes a copy in the original colors without changing them.

"Black Copy"
Makes copies in black regardless of colors of originals. ☛ See page 24.

"Full Color Copy"
Makes copies in full color. ☛ See page 24.

"Single Color"
Makes copies in a specified color. ☛ See page 26.

1 Select a color mode using the key.



- The "Full Color Copy," "Single Color," "Auto Color Select," and "Black Copy" modes are switched in that order each time you press the key.
- When you select the "Single Color" mode, use the **Color** keys to select a color to copy in. The Single Color mode also can be selected by just pressing a **Color** key. However, when you select the "Black" key, the color mode is set to "Black".
- If you do not set any other functions, press the **Start** key to start a copy operation.

Image Density Adjustment

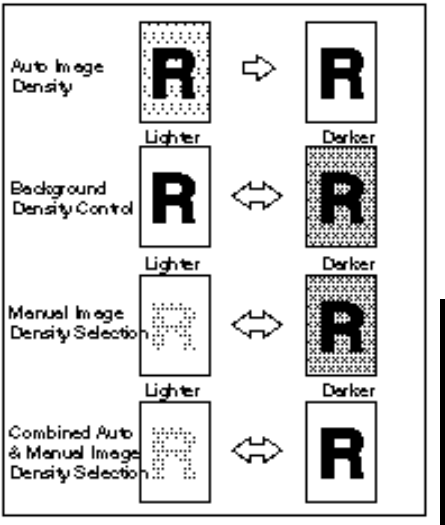
This function adjusts the copy density based on the original type.

- The image density adjustment function is divided into the following four types:

  "Auto Image Density"
  Automatically make copies in appropriate background density.

  "Background Density Control"
  Adjusts the background density to a lighter or darker setting. You can specify 9 steps of density. When you set Background Density Control mode, "Auto Image Density" mode is cleared. ☛ See page 33, "Background Density Control".

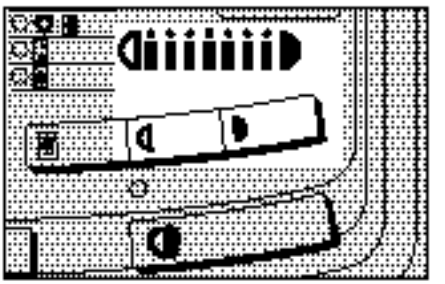
  "Manual Image Density Selection"
  Makes whole copies lighter or darker. You can specify 7 levels of density.



"Combined Auto & Manual Image Density Selection"
If you use Manual Image Density Select to increase image density, the background may come out standard. Therefore, use this function to mask out dark backgrounds at the same time as increasing image density (for example with newspaper originals).

When adjusting the density

1 Adjust the density using the **Lighter** and **Darker** keys.



- ❒ The density indicator moves.
- ❒ If you do not set any other functions, press the **Start** key to copy.
- ❒ If copies do not come out as you would like, try adjusting the background density before performing the "Manual Image Density Selection." ☛ See page 33, "Background Density Control".

Original Image Type Selection

This function detects the letter parts and photo parts of an original.

❒ This function is divided into the following three types:

"Auto (Letter/Photo) mode"
For copying images containing a mixture of photos, pictures and text.

"Letter mode"
This mode should be used for copying originals consisting of characters.

"Photo mode"
This mode should be used for copying photo or picture originals.

❒ When "Auto (Letter/Photo) mode" or "Photo mode" is selected, the full color photo type is divided into the following three types:

"Printed Photo" - Use this mode when originals are photographs printed in magazines.

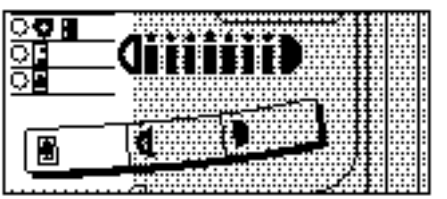
"Glossy Photo" - Use this mode when originals are photographs.

"Copied Photo" - Use this mode when copying color copies.

❒ You cannot select the photo type when you select "Black Copy" or "Single Color" mode in "Color Selection" or "Black Copy/Single Color" mode in the user tools "Auto Image Density".

❒ You can change the copier's settings for these functions. ☛ See page 103, "USER TOOLS, Copier's settings for photo type (Photo mode)/(Auto (Letter/Photo) mode)."

1 Select the original type using the **Original** key.



❒ Press the **Original** key repeatedly until you reach the mode you require — Auto, Letter or Photo.

When copying photographic paper or color copy originals:

❶ Select the photo original type using the **0** (**Photo Type**) key.

❒ "Glossy Photo," "Copied Photo," and "Printed Photo" are switched in that order each time you press the **0** (**Photo Type**) key.

❒ If you do not set any other functions, press the **Start** key to start a copy operation.

Copy Paper Selection

This function selects a suitable size of copy paper based on the original size.

❒ The copy paper selection function is divided into the following three types:

"Auto Paper Select"
Automatically selects a suitable size of copy paper based on the original size and the reproduction ratio.

"Manual Paper Select"
Manually selects one of the paper trays containing a suitable size of copy paper.

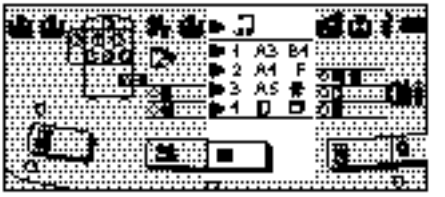
"Bypass Feed Select"
Allows copying from the bypass feed table when using OHP sheets, thick paper, or non-standard size paper. ☛ See page 70, "COPYING FROM THE BYPASS FEED TABLE".

❒ Some sizes of originals are not selected correctly. See "Original Sizes Difficult To Detect." ☛ See page 43.

❒ When you set remarked paper in a paper tray, the paper type can be displayed on the guidance display.

☛ See page 108, "USER TOOLS, Remarked Paper".

When selecting copy paper manually:



1. Use the **Paper Selection** key to select a paper tray containing a suitable size of copy paper.

❒ Each time you press the Paper Selection key, "▶" moves along to show the active paper tray.

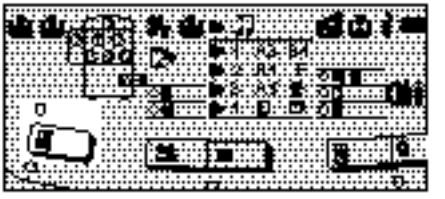
❒ If you do not set any other functions, press the **Start** key to start a copy operation.

Auto Reduce/Enlarge

Automatically reduces/enlarges copies based on a specified paper size.

- ❒ You need not select the reduction/enlargement ratio manually.
- ❒ This function is useful when copying different sizes of originals onto the same size of paper.
- ❒ The magnification is selected in the range of 25 to 400 %.
- ❒ If you set an original with an image in the different direction of copy paper, the image cannot be copied by rotating it 90 degrees in the copy paper direction. Be sure to set originals in the same direction as copy paper.
- ❒ The magnification might not be selected correctly for some sizes of originals. See "Original Sizes Difficult To Detect." ☛ See page 43.
- ❒ You can set different sizes of originals at the same time in the optional document feeder. See "When setting different sizes of originals in the ADF." ☛ See page 62.

1. Press the **Auto Reduce/Enlarge** key.



2. Select copy paper using the **Paper Selection** key.

- ❒ When you do not set any other function, press the **Start** key to start a copy operation.

COPYING FROM THE BYPASS FEED TABLE

Make copies by setting paper in the bypass feed table. The bypass feed table allows you to copy onto post cards or other thick paper, OHP transparencies, and released paper as well as some sizes of paper that cannot be set in the paper tray.

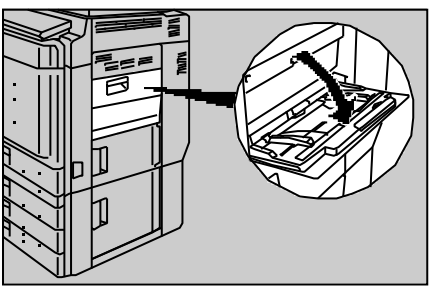
Important

If paper is bent, correct it before setting the paper in the bypass feed table. If the bend is not corrected, a paper jam might occur.

- ❒ For the paper sizes, directions, and quantity that can be set in the bypass feed table, see "PAPER." ☛ See page 45.
- ❒ When copying onto OHP sheets or thick paper, see "When Copying Onto OHP Sheets or Thick Paper." ☛ See page 72.
- ❒ Except for xx page standard sizes, paper size that can be set is 100 - 297 mm, 4.0" ~ 11.6" long and 140 - 432 mm, 5.5" ~ 17.0" wide. You must specify the paper size with the user tools and select "Odd size" in step **2** for paper sizes in this range because they are not detected in the bypass feed table. ☛ See page 107, "USER TOOLS, Special paper size set".
- ❒ If you want to copy onto A6▭ paper, contact your service representative.

1 Open the bypass feed table.

- ❒ The "Bypass Feed" indicator is lit.



2 Enter "▭," "▯," or "Odd size" (1 - 3) using the **Number** keys, and press the **Recall/Enter** key.

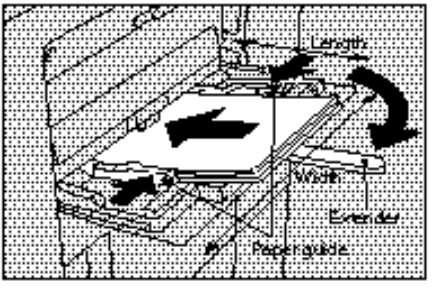
Bypass tray (1–3>#)
1:▭ 2:▯ 3:Odd size 1

When selecting non-standard paper:

❶ Use the **Number** keys to select the paper size (1 - 5) specified with the user tools, and press the **Recall/Enter** key.

❒ When you close the bypass feed table, the paper size setting is canceled.

3 Slide the paper guides to the paper width. Insert the paper until the beep sounds.



Important

❒ If the paper guides are not adjusted to the paper size properly, originals might be copied in a slanting direction or a paper jam might occur.

❒ If the beeper function is turned off, the beeper does not sound. Insert paper lightly into the table. ☛ See page 108, "USER TOOLS, Operation panel beeper".

❒ When setting paper larger than A4□, 8 1/2 x 11", pull out the extender.

❒ When setting two or more sheets at a time in the table, shuffle the sheets to avoid a paper jam.

4 Set your originals and press the **Start** key.

When copying onto OHP sheets or thick paper

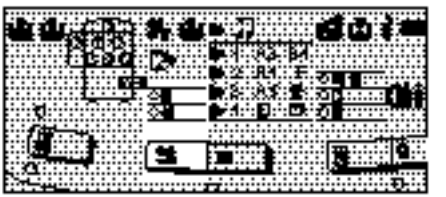
❒ When using paper thicker than 105 g/m^2, 27.9 lb, select "Thick Paper."

1 Open the bypass feed table and specify the paper direction and size.

❒ Refer to steps 1 and 2 in "COPYING FROM THE BYPASS FEED TABLE." ☛ See page 70.

2 Select the paper type (OHP, Thin Paper) using the **Special Paper** key.

❒ "OHP" and "Thick Paper" are switched each time you press the **Special Paper** key. This also allows you to reset them.



When selecting OHP sheets:

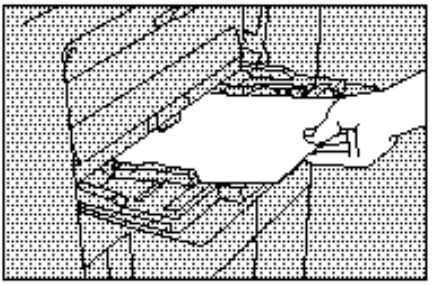
❶ Select the way to process originals.

- When you want to process photo or solidly colored parts roughly for OHP projection, enter "1." When you want to process originals normally, confirm that Item 2 is blinking on the guidance display.
- When you select Letter mode in the original image type selection before or after selecting the paper type, the original image is not processed roughly even if you select 1: Yes in this step.

Business Graphics OHP Enhancement (1-2>#)
1:Yes 2:No 2

❷ Press the **Recall/Enter** key.

3 Slide the paper guides to the paper width. Insert the paper until the beeper sounds.



- ❒ Post cards must not be folded, and must be set in the portrait direction.
- ❒ If the beeper function is turned off, the beeper does not sound. Insert paper lightly into the table. ☛ See page 108, "USER TOOLS, Operation panel beeper".

Important

- ❒ If the paper guides are not adjusted to the paper size properly, originals might be copied in a slanting direction or a paper jam might occur.
- ❒ When setting two or more sheets at a time in the table, shuffle the sheets to avoid a paper jam.

4 Set your originals and press the **Start** key.

100%
OHP film confirmed

5 Confirm that the OHP sheet or thick paper is set in the table, and press the **Start** key.

Important

- ❒ When copying onto OHP sheets, remove the delivered copies sheet by sheet.

Two-Sided Copies

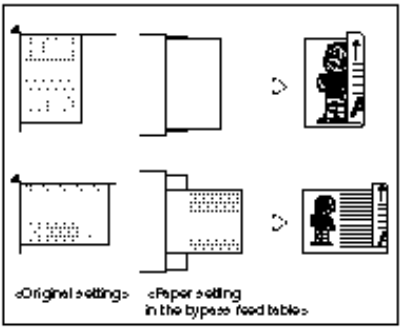
❒ This function can be used when your copier is of the Basic type copier.

Use the bypass feed table to copy onto the underside of paper that has been already copied on.

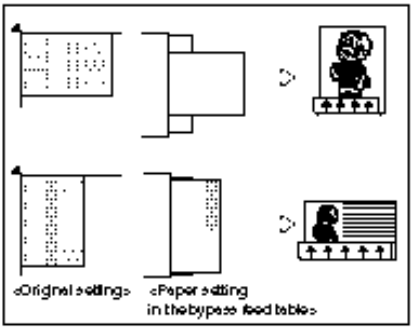
Important

- ❒ If paper is bent, correct it before setting the paper in the bypass feed table. If the bend is not corrected, a paper jam might occur.
- ❒ Do not reuse paper that has been already copied on by other type of copier. However, you can use the **Duplex Side 2** key to copy onto the underside of paper that has been copied on by this copier.
- ❒ When copying onto the underside of once-used paper, the "image loss width" is 4 ~ 8 mm or less on the rear edge.
- ❒ When you make a copy on the underside of paper, see page 47 for information on the texture flow direction of paper.
- ❒ Original and paper setting and copies

Opened horizontally



Opened vertically

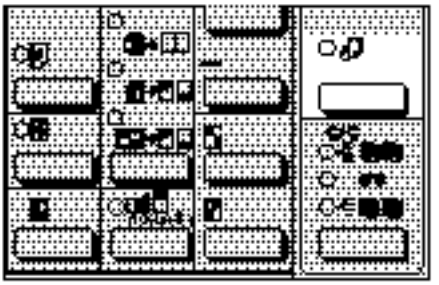


When copying onto the underside of paper:

❶ Confirm the paper direction and set the paper in the bypass feed table with its underside (side to be copied on) face up.

❷ Press the **Duplex Side 2** key.

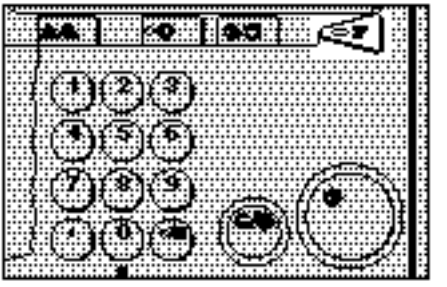
❸ Set your originals and press the **Start** key.



INTERRUPT COPYING

This function allows you to interrupt the current copy job to copy another original.

❒ In interrupt copying, the following functions cannot be specified:
Color Balance Adjustment, Sort, Stack, Staple, Projector, Program, Auto Color Calibration



1 Press the **Interrupt** key.

❒ The copier finishes delivering the cuurent copy and enters the ready condition.

❒ If the user code is set, enter the user code (6 digits or less) using the **Number** keys, and press the **Recall/ Enter** key.

2 Remove the originals being copied and make any other copies you need.

3 Remove the originals you have just copies and the delivered copies.

4 Press the **Interrupt** key again.

❒ The copier returns to the previous copy setting.

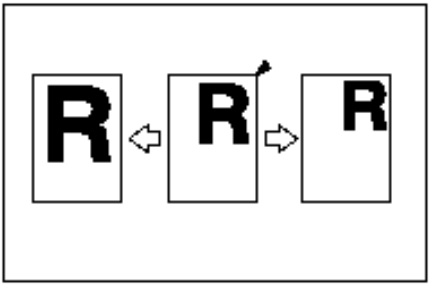
❒ Since the settings before the interrupt remains, you can resume the previous copy run only by pressing the **Start** key after interrupt copying is completed.

ZOOM AND PRESET REDUCE/ENLARGE

Preset Reduce/Enlarge

This function reduces/enlarges copies with a preset magnification.

❒ There are 12 fixed ratios (5 enlargement ratios and 7 reduction ratios).



Relationship between the fixed ratios and the original and paper sizes

Metric version

Enlargement Ratio (%)	Original Size → Paper Size
400	
200	A5→A3 A6→A4
141	A4→A3 A5→A4 A6→A5
122	A4→B4 A5→B5 A6→B6
115	B4→A3 B5→A4 B6→A5

Reduction Ratio (%)	Original Size → Paper Size
93	When setting a margin on the edges of an original
82	B4→A4 B5→A5 B6→A6
75	
71	A3→A4 A4→A5 A5→A6
61	A3→B5 A4→B6
50	A3→A5 A4→A6 B4→B6
25	

Inch version

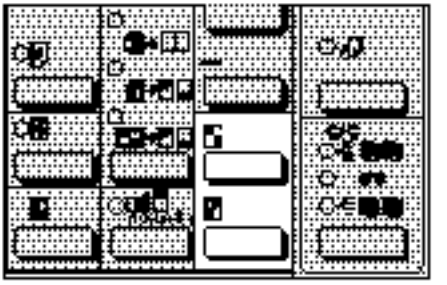
Enlargement Ratio (%)	Original Size → Paper Size
400	
200	
155	5½"x8½" → 8½"x14"
129	8½"x11" → 11"x17"
	5½"x8½" → 8½"x11"
121	8½"x14" → 11"x17"

Reduction Ratio (%)	Original Size → Paper Size
93	
85	
77	8½"x14" → 8½"x11"
74	11"x15" → 8½"x11"
65	11"x17" → 8½"x11"
	8½"x11" → 5½"x8½"
50	
25	

❒ You can program your own preset ratios in steps of 1%. ☛ See page 109, "USER TOOLS, Set User R/E".

❒ You can select the magnification regardless of the original and paper sizes. However, part of an image might be lost or an unnecessary margin might be made in a copy for some magnifications.

1 Select a magnification using the **Enlarge** or **Reduce** key.



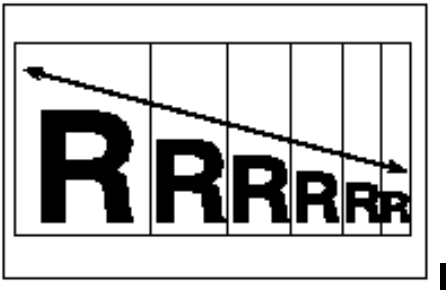
❒ The selected magnification appears on the guidance display.

❒ Press the **Enlarge** key to switch the preset enlargement ratio or press the **Reduce** key to switch the preset reduction ratio. When you specify an arbitrary magnification, it is displayed as one of the preset magnifications.

2 Set your originals and press the **Start** key.

Zoom

This function specifies the reduction/enlargement ratio in 1 % steps to make copies using finer magnifications. Use the **+ Up** and **– Down** keys.



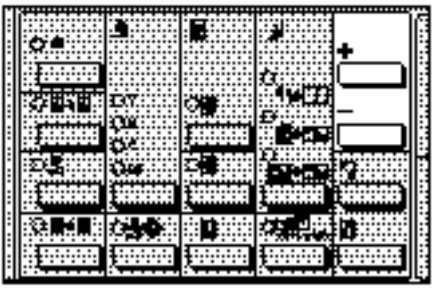
❒ You can specify the magnification in the range of 25 to 400 %.

❒ You can also select a fixed magnification close to your desired one with the **Reduce** or **Enlarge** key and then adjust it using the **+ Up** and **– Down** keys.

1 Specify the magnification using the **+ Up** and **– Down** keys.

❒ The specified magnification is displayed on the guidance display.

❒ If you specify a wrong value, reenter the correct one using the **+ Up** and **– Down** keys.



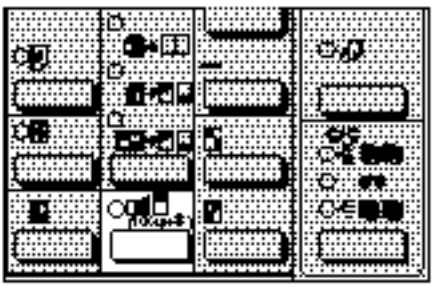
2 Set your originals and press the **Start** key.

Zoom (Number key + #)

This function specifies the reduction/enlargement ratio in 1 % steps with the **Number** keys to make copies using finer magnifications.

❒ You can specify the magnification in the range of 25 to 400 %.

1 Press the **Zoom (Number key + #)** key.



2 Enter the magnification using the **Number** keys.

100% (25–400>#)

❒ The entered value blinks on the guidance display.

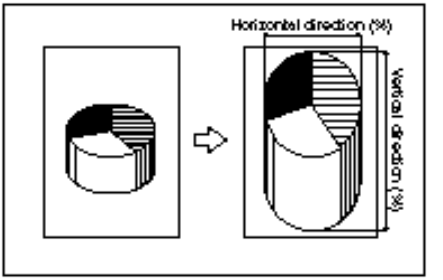
❒ If you specify a wrong number, press the **Clear/Stop** key and reenter the correct one.

3 Press the **Recall/Enter** key.

4 Set your originals and press the **Start** key.

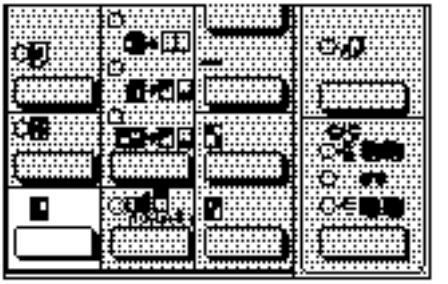
DIRECTIONAL MAGNIFICATION

This function makes copies by selecting independent ratios for vertical and horizontal directions. This allows you to change the shape of an image.



- ❒ This function can be used only if your copier has a unit for two-sided copying.
- ❒ You can specify the magnification in the range of 25 to 400 %.
- ❒ You can also select a fixed magnification close to your desired one with the **Reduce** or **Enlarge** key and then press the **Directional Mag.** key to adjust the selected value using the **+ Up** and **– Down** keys.

1 Press the **Directional Mag.** key.



2 Enter the magnification in the horizontal direction using the **Number** keys, and press the **Recall/Enter** key.

H=100% V=100%
(Number Key>#)

- ❒ The entered value is displayed on the guidance display.
- ❒ If you specify a wrong value, press the **Clear/Stop** key and reenter the correct one before pressing the **Recall/Enter** key.

❒ When you use **+ Up** and **– Down** keys, adjust the magnification with these keys before pressing the **Recall/Enter** key.

3 Enter the magnification in the vertical direction using the **Number** keys, and press the **Recall/Enter** key.

❒ The entered value is displayed on the guidance display.

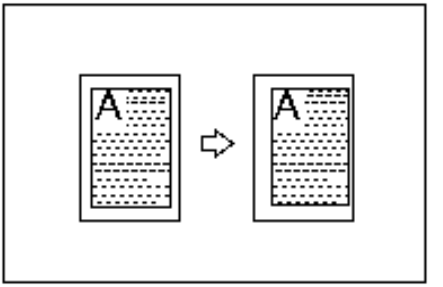
4 Set your originals and press the **Start** key.

❒ For setting originals, see "SETTING ORIGINALS." ☛ See page 60.

IMAGE SHIFTING

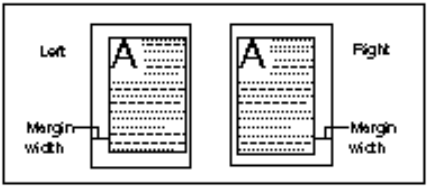
Margin Adjustment

This function makes copies with a margin on their left or right side. This is useful when making a margin on copies for punching or stapling.



- ❒ This function can be used only if your copier has a unit for two-sided copying.
- ❒ You can specify a margin in the range of 1 to 20 mm (in 1 mm steps) on the left or right side. The default setting is 10 mm on the left side.

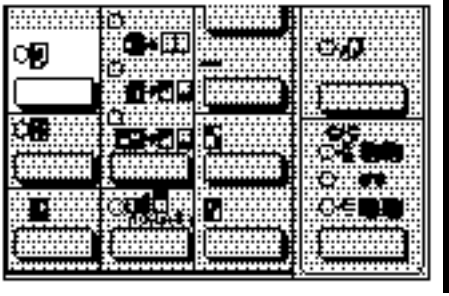
◆ Margin positions (left/right) and width



- ❒ You can change the copier's settings for the margin directions and width.
  ☛ See page 104, "USER TOOLS, Default Margin Setting".
- ❒ If you specify too wide a margin, part of an image will be lost on the copy.
- ❒ You can also change the margin width on side 2.

Making a margin on 1 sided copies

1. Press the **Margin Adjustment** key.



2 Enter the margin width using the **Number** keys and press the **Recall/Enter** key.

❒ If you specify a wrong value, press the **Clear/Stop** key and reenter the correct one before pressing the **Recall/Enter** key.

Default Margin: Width (1–20>#)
10mm

3 Enter the margin position (1: Left, 2: Right) using the **Number** keys and press the **Recall/Enter** key.

Default Margin: Position (1–2>#)
1: Left 2: Right 2

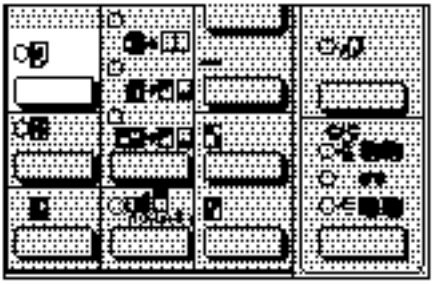
4 Set your originals and press the **Start** key.

❒ For setting originals, see "SETTING ORIGINALS." ☛ See page 60.

Making margins on 2 sided copies

❒ Before setting this function, be sure to set the Duplex mode.

1 Press the **Margin Adjustment** key.



2 Enter "1" using the **Number** key when you specify the margin on side 1, and "2" otherwise. Then press the **Recall/Enter** key.

Set Side 1 Margin Adjustment (1–2>#)
1: Yes 2: No 1

3 Enter the margin width for the front side using the **Number** keys and press the **Recall/Enter** key.

❒ If you specify a wrong value, press the **Clear/Stop** key and reenter the correct one before pressing the **Recall/Enter** key.

Side 1 Margin Adjustment (1–20>#)
10mm

4 Enter the margin position for the front side (1: Left, 2: Right) using the **Number** keys and press the **Recall/Enter** key.

Side 1 Margin Adjustment: Position (1–2>#)
1: Left 2: Right 1

5 Enter "1" using the **Number** key when you specify the margin on side 2, and "2" otherwise. Then press the **Recall/Enter** key.

Set Side 2 Margin Adjustment (1–2>#)
1: Yes 2: No 1

6 Enter the margin width for the reverse side using the **Number** keys and press the **Recall/Enter** key.

❒ If you specify a wrong value, press the **Clear/Stop** key and reenter the correct one before pressing the **Recall/Enter** key.

Side 2 Margin Adjustment: Width (1–20>#)
10mm

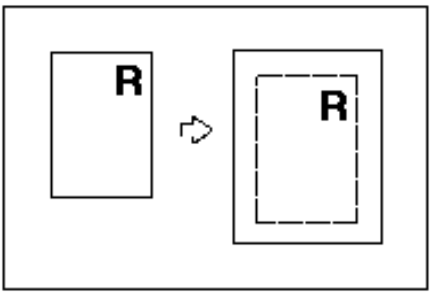
7 Enter the margin position for the reverse side (1: Left, 2: Right) using the **Number** keys and press the **Recall/Enter** key.

Side 2 Margin Adjustment: Position (1–2>#)
1: Left 2: Right 2

8 Set your originals and press the **Start** key.

❒ For settings originals, see "SETTING ORIGINALS". ☛ See page 60.

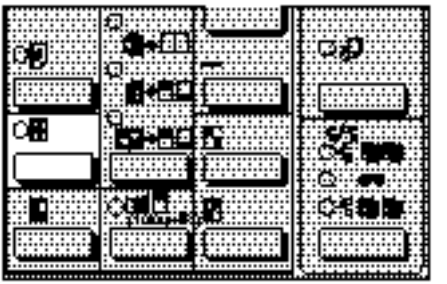
Centering



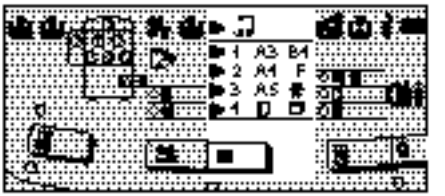
This function makes copies by shifting the entire image of an original to the center of copy paper.

- ❒ This function can be used only if your copier has a unit for two-sided copying.
- ❒ You can use the Centering function even when copying from the bypass feed table. However, you cannot use the Centering function when using non-standard paper.
- ❒ When the Centering function is specified, the Book Original, Combined 2 Original, and Auto Paper Select functions cannot be used.

1 Press the **Centering** key.



2 Select the copy paper using the **Paper Selection** key.



- ❒ When using the bypass feed table, specify the paper size. ☛ See page 70, “COPYING FROM THE BYPASS FEED TABLE”.

3 Set your originals and press the **Start** key.

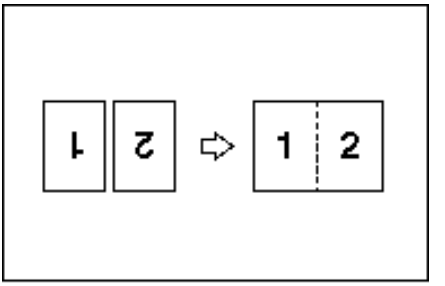
- ❒ For setting originals, see “SETTING ORIGINALS.” ☛ See page 60.
- ❒ If the message “Cannot detect original size” is displayed, lift and lower the platen cover or the optional document feeder before pressing the **Start** key. However, the paper size might not be detected properly for some sizes of originals. ☛ See page 43, “Original Sizes Difficult To Detect”.

SINGLE COPIES

Combine 2 Originals

❒ This function can be used only when your copier is equipped with the optional document feeder.

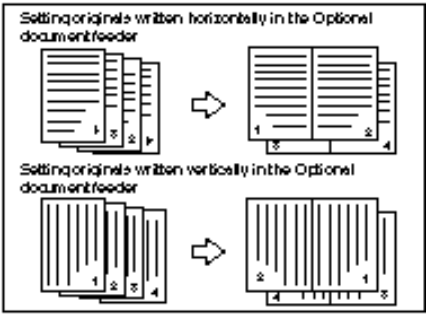
This function combines two one-sided originals on one copy.



Copy sizes and setting originals

❒ You cannot copy different sizes and directions of originals in one copy run because the original size is determined when the first sheet is read on the exposure glass (platen glass).

❒ When you specify the Combine 2 Originals mode, the Auto Reduce/ Enlarge, Centering and Auto paper Select functions cannot be used.


Setting originals written horizontally in the Optional document feeder
Setting originals written vertically in the Optional document feeder

❒ Please refer to the following table when you select the copy paper size and scaling ratio:

Metric version:

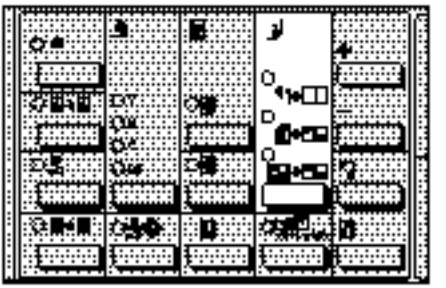
Original	Copy paper	Ratio
A4	A4	71%
	A3	100%
A5	A4	100%
	A3	141%
B5	A4	82%
	A3	115%

Inch version:

Original	Copy paper	Ratio
8½"x11"	8½"x11"	65%
	11"x17"	100%
5½"x8½"	8½"x11"	100%
	11"x17"	129%

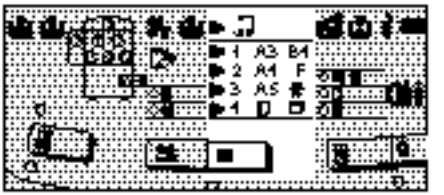
1 Select the Combine 2 Originals mode using the **Single Copies** key.

❒ The “Combine 2 Originals,” “2 Sided Original,” and “Book Original” modes are switched each time you press the **Single Copies** key. This also allows you to reset them.



2 Select the copy paper using the **Paper Selection** key.

❒ When using the bypass feed table, specify the paper size. ☛ See page 70, “COPYING FROM THE BY-PASS FEED TABLE”.



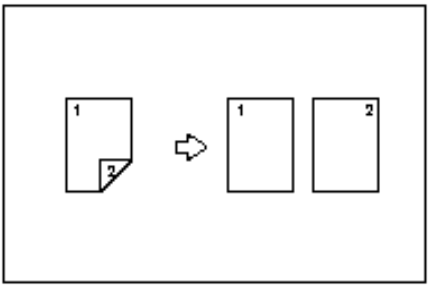
3 Set your originals and press the **Start** key.

❒ Set the originals in the optional document feeder with the first sheet placed on top.

2 Sided Original

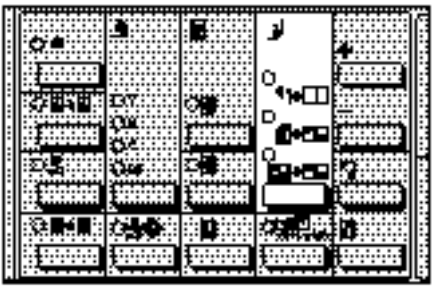
❒ This function can be used only when your copier is equipped with the optional document feeder.

This function makes one-sided copies from two-sided originals.



1 Select the "2 Sided Original" mode using the **Single Copies** key.

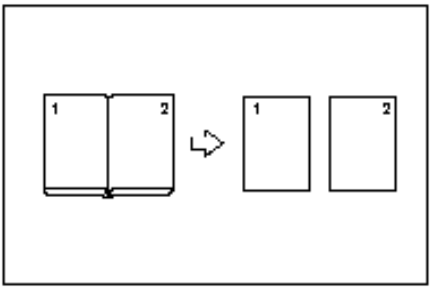
❒ The "Combine 2 Originals," "2 Sided Original," and "Book Original" modes are switched each time you press the **Single Copies** key. This also allows you to reset them.



2 Set your originals and press the **Start** key.

Book Original

This function makes one-sided copies from two facing pages of bound (book) originals.

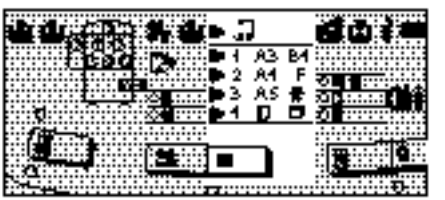


❒ When you specify the Book Original mode, the Auto Paper Select, Auto Reduce/Enlarge, and Centering functions cannot be used.

1 Select the Book Original mode using the **Single Copies** key.

❒ The “Combine 2 Originals,” “2 Sided Original,” and “Book Original” modes are switched each time you press the **Single Copies** key. This also allows you to reset them.

2 Select the copy paper using the **Paper Selection** key.



❒ When using the bypass feed table, specify the paper size. ☛ See page 70, “COPYING FROM THE BY-PASS FEED TABLE”.

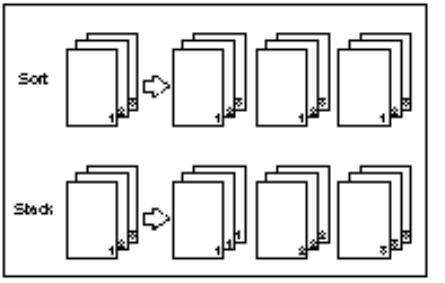
3 Set your originals and press the **Start** key.

SORT/STACK AND STAPLE

❒ These functions can be used only when your copier is equipped with the optional sorter stapler.

Sort/Stack

When handling documents for a meeting, for example, this function sorts pages into ordered sets, or stacks them by page number.



❒ The Sort/Stack function cannot be used for some sizes of paper. ☛ See page 175, “Specifications”.

❒ The Sort/Stack functions cannot be used when using OHP sheets or thick paper.

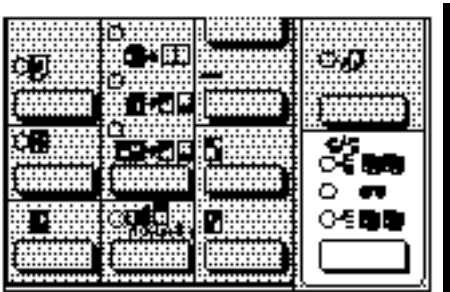
❒ Up to 10 copies can be set for the Sort function.

❒ Up to 10 originals can be stacked at a time.

❒ The maximum number of sheets that can be stacked in a paper tray is shown below.

Sort	Stack
25 (B4, 8 1/2" x 14" or larger) 30 (A4, 8 1/2" x 11" or smaller)	20 (B4, 8 1/2" x 14" or larger) 25 (A4, 8 1/2" x 11" or smaller)

1 Select the Sort or Stack mode using the **Sorter** key.



❒ The “Sort,” “Staple,” and “Stack” modes are switched each time you press the **Sorter** key. This also allows you to reset them.

❒ Stacked copies cannot be stapled.

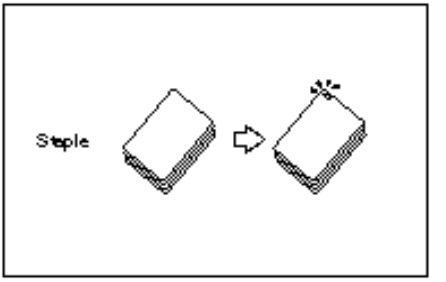
2 Enter the number of copies using the **Number** keys.

3 Set your originals and press the **Start** key.

❒ Copies can also be stapled. ☛ See page 92, Step 4 in “Manual Staple”.

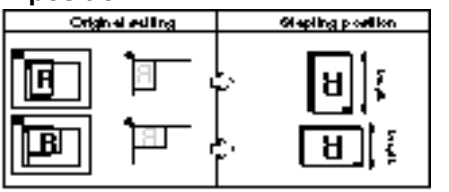
Staple

This function staples sorted copies. The Staple function is divided into “Auto Staple” which staples copies automatically and “Manual Staple” which starts stapling when you press the **Sorter** key.



- ❒ The Staple function cannot be used for some sizes of paper. ☛ See page 175, “Specifications”.
- ❒ Different sizes of paper cannot stapled.
- ❒ The Staple function cannot be used when using OHP sheets or thick paper.
- ❒ If you use paper which is 52 g/m^2, 13.8 lb thick or more or bent, a staple or paper jam might occur. In this case, set the paper upside down.
- ❒ Up to 10 copies can be set for the Staple function.
- ❒ Up to 20 originals can be stapled at a time.
- ❒ For adding staples, see “ IS LIT: ADDING STAPLES.” ☛ See page 132.
- ❒ If a staple jam occurs, see “REMOVING JAMMED STAPLES.” ☛ See page 134.

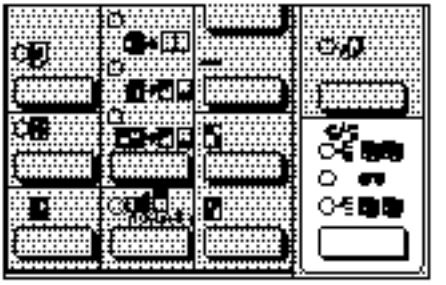
♦ **Original direction and stapling position**



Auto Staple

❒ This function can be used only when your copier is equipped with the optional document feeder.

This function staples sorted copies automatically.



1. Select the Staple mode using the **Sorter** key.

❒ The “Sort,” “Staple,” and “Stack” modes are switched each time you press the **Sorter** key. This also allows you to reset them.

2. Enter the number of copies using the **Number** keys.

3. Set the originals in the optional document feeder and press the **Start** key.

❒ The copies are stapled automatically when they have been sorted.

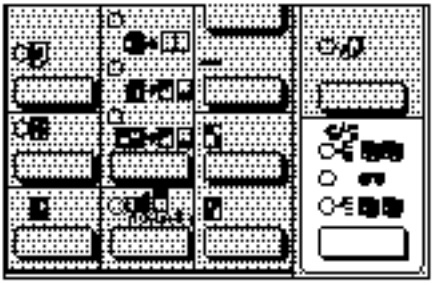
❒ Align the top of the originals to the scale on the rear side. ☛ See page 90, “Original direction and stapling position”.

❒ If you copy originals exceeding the limit quantity for stapling, the copies are delivered but cannot be stapled.

❒ If you copy onto different length of paper, the copies cannot be stapled.

Manual Staple

This function starts stapling copies when you press the **Sorter** key after they are sorted.



1. Select the Sort mode using the **Sorter** key.

❒ The “Sort,” “Staple,” and “Stack” modes are switched each time you press the **Sorter** key. This also allows you to reset them.

2. Enter the number of copies using the **Number** keys.

3. Set the originals in the optional document feeder and press the **Start** key.

❒ Align the top of the originals to the scale on the rear side. ☛ See page 90, “Original direction and stapling position”.

4. When copying has finished the Staple indicator will blink. Press the **Sorter** key.

❒ The copies are stapled.

❒ If you copy originals exceeding the limit quantity for stapling, the copies are delivered but the “Staple” lamp does not blink and the copies cannot be stapled.

❒ If you copy onto different lengths of paper, the “Staple” lamp does not blink and the copies cannot be stapled.

PROGRAM

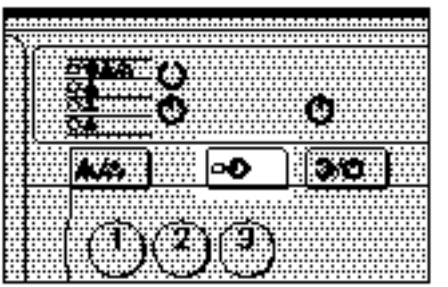
When there are frequently used copy jobs, you can store their settings in a program to execute them repeatedly without setting them each time.

- ❒ To use the Program function, store a job you want to use frequently. This operation is called “Program Memory.”
  Stored settings can be recalled easily by the “Program Recall” function.
- ❒ The Program function can store up to three jobs.
- ❒ Copy paper size settings are stored as actual sizes, not paper trays. If the same size paper is stored in all trays, trays are selected in the order tray 1, tray 2, tray 3 and tray 4.
- ❒ Unless you store another setting, stored settings are not cleared even when you turn off the power or press the **Clear Modes/Stand-by** key.
- ❒ Stored programs cannot be deleted. To change a stored program, modify the settings and store them in the program again. ☛ See “Program Memory/Change.”
- ❒ Copy jobs and the number of copies for the projector unit cannot be stored by the Program function.

Program Memory/Change

1 Specify copy settings that you want to store.

2 Press the **Program** key.



3 Enter “0” using the **Number** key and press the **Recall/Enter** key.

Program (1–3/0>#) __ __ __ __ __ __
1–3:Recall 0:Store No:_

4 Enter the number of the program which you wish to store the settings in (1 - 3), and press the **Recall/Enter** key.

Select memory number (1–3>#)
No:_

When a program has been already stored (Change)

❶ Specify whether to overwrite an existing program using the **Number** keys.

No.1 is used (1–2>#)
Change 1:Yes 2:No 2

- To overwrite the existing program, enter "1." To cancel storing, confirm that Item 2 is blinking.

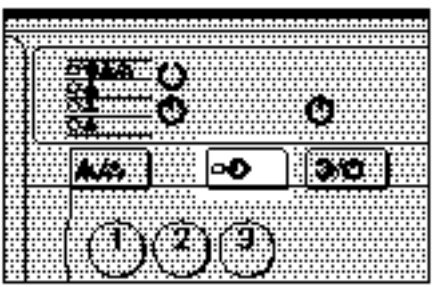
❷ Press the **Recall/Enter** key.

- When you cancel overwriting the existing program, return to step 4 above.

❒ To know settings stored in a program, see "Program Recall."

Program Recall

1 Press the **Program** key.



2 Enter a program number (1 - 3) to be recalled using the **Number** keys, and press the **Recall/Enter** key.

Program (1–3/0>#)
1–3:Recall 0:Store No:_

❒ The settings stored in the selected program are recalled.

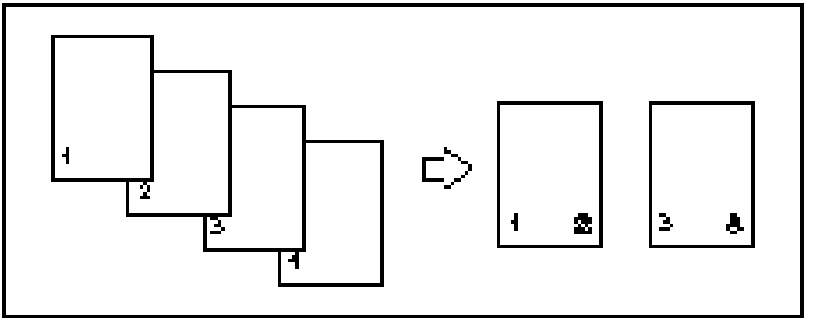
3 Set your originals and press the **Start** key.

MAKING TWO-SIDED COPIES (ONLY WITH MODEL HAVING THIS FEATURE)

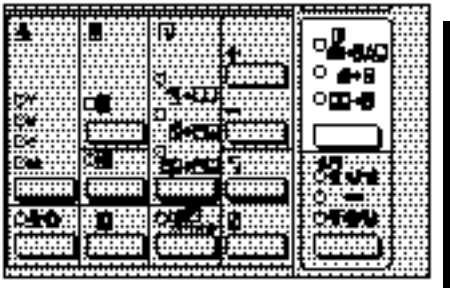
- ❒ This function can be used only if your copier has a unit for two-sided copying.
- ❒ To avoid problems caused by curled copies, try turning over the paper stack in the paper tray. If there is no improvement change to copy paper with less curl.
- ❒ When copying onto the underside of once-used paper, the “image loss width” is 4 ~ 8 mm or less on the rear edge.
- ❒ The following paper limitations apply:

	Metric version	Inch version
Maximum paper size	A3	11" x 17"
Minimum paper size	A5	5½" x 8½"
Maximum paper weight	104 g/m²	28 lb
Minimum paper weight	64 g/m²	17 lb

From One-Sided Originals (1 Sided Originals)



1 Press the **Duplex** key to light the **1 Sided Originals** indicator.

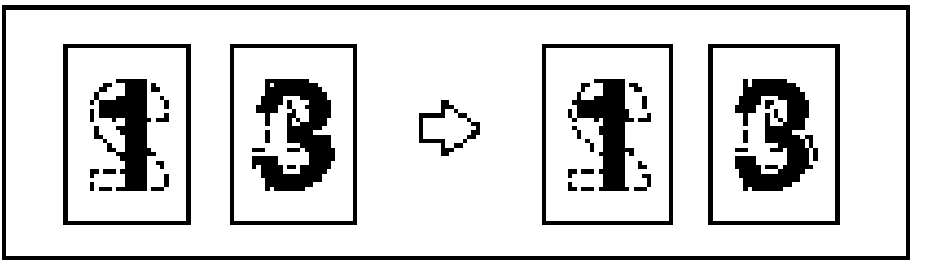


2 Set your original on the exposure glass (platen glass) or in the optional document feeder.

- ❒ Start with the last page of the originals.

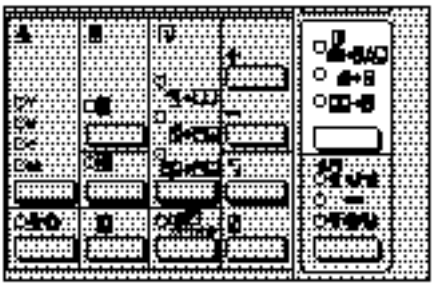
3 Press the **Start** key.

From Two-Sided Originals (2 Sided Original)



❒ It is recommended to use this function with the optional document feeder.

1 Press the **Duplex** key to light the **2 Sided Original** indicator.

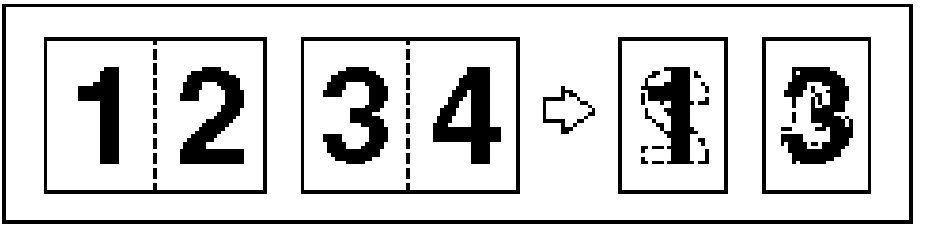


2 Set your original in the optional document feeder.

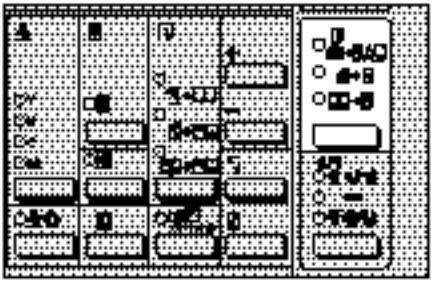
❒ Start with the last page of the originals.

3 Press the **Start** key.

From Facing Pages (Book Original)



1. Press the **Duplex** key to light the **Book Original** indicator.



2. Start with the last page of your book original and work your way to the beginning.
   Place the original face down on the exposure glass (platen glass) and align the last page with the left scale.

   Or set the facing original in the optional document feeder.

3. Press the **Start** key.

CHANGING THE COPIER'S SETTINGS

USER TOOLS

This feature allows you to change the default settings and customize the copier for operations you often carry out.

❒ The user tool screen is divided into two types; one is used for selecting a user tool group (1 - 7 or 1 - 6) and the other is used for selecting a function in a selected user tool group.

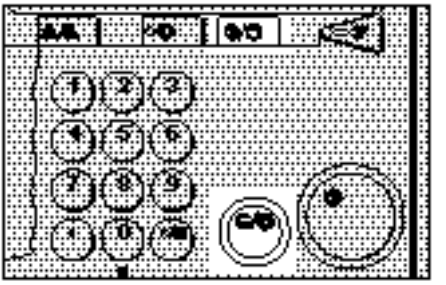
Changing the default settings

❒ After entering a value using the **Number** keys, you must press the **Recall/Enter** key.

❒ Even when you turn off the power or press the **Clear Modes/Stand-by** key, settings specified using user tools are not cleared unless you change the settings or "reset the copier's settings."

1 Confirm that the copier is in the ready condition.

2 Press the **Clear Modes/Stand-by** key and then press the **Clear/Stop** key for three seconds or more.



❒ If you change the copier's settings during or after specifying a function, all the settings you are specifying are canceled.

When adjusting the sensitivity:

❶ Press the **Interrupt** key while pressing the **Recall/Enter** key.

- You can adjust the sensitivity without canceling other function settings you are specifying.

❷ Go to step **4**.

3 Enter a number of a user tool group (1~7 or 1~6) you want to adjust using the **Number** keys, and press the **Recall/Enter** key.

User Tools (+/–/1–7>#)
[1]Default Image Settings

❒ You can use the **+ Up** key to display the numbers and contents of the user tool groups sequentially. To display those of the previous user tool group, press the **– Down** key.

4 Enter a number of a function (1~) you want to adjust using the **Number** keys, and press the **Recall/Enter** key.

[1]Default Image Settings (+/–/1–8>#)
No.1:Default Photo Type (Photo mode)

❒ You can use the **+ Up** key to display the numbers and contents of the function sequentially. To display those of the previous user tool function, press the **- Down** key.

❒ Information displayed on the guidance display depends on the number selected in step 3.

❒ For the functions that can be specified or changed and the methods of these operations, see "User Tool Menu." ☛ See page 103.

5 Change the default settings or specify the operational conditions following the information displayed on the guidance display.

❒ To change the entered value, press the **Clear/Stop** key and reenter another value.

6 Press the **Recall/Enter** key.

❒ The default settings have been changed.

7 Press the **Clear Modes/Stand-by** key.

❒ The copier returns to the ready condition.

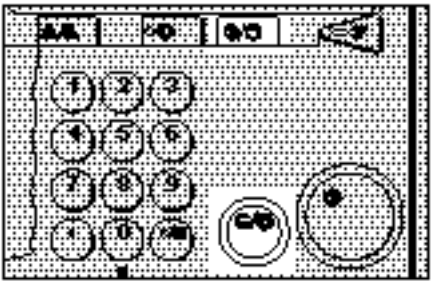
Resetting the default settings

This procedure resets the default settings except those in “6 Set user code(s)” to the factory-shipped values.

❒ For changing and canceling the settings in “6 Set user code(s),” see “User Tool Menu.” ☛ See page 105.

1 Confirm that the copier is in the ready condition.

2 Press the **Clear Modes/Stand-by** key and then press the **Clear/ Stop** key for three seconds or more.



3 Press the **Interrupt** key while pressing the **Decimal Point (.)** key.

User Tools (+/–/1–7>#)
[1]Default Image Settings

4 Confirm that Item 1 is blinking, and press the **Recall/Enter** key.

Reset to factory default setting
1:Yes 2:No

❒ The copier’s settings except those in “6 Set user code(s)” are reset to the factory-shipped values.

❒ If you cancel resetting the copier’s settings, enter “2” using the **Number** key and press the **Recall/Enter** key.

User Tool Menu

❒ To display or exit an item you want to adjust, follow the procedure shown below.

1. Press the **Interrupt** key while pressing the **Recall/Enter** key.
2. Enter a number of a function (1~8) you want to adjust using the **Number** keys, and press the **Recall/Enter** key.
3. Enter a choice number or a value using the **Number** keys and press the **Recall/Enter** key.
4. After adjusting the settings, press the **Clear Modes/Stand-by** key to return the copier to the ready condition.

❒ See "Changing the default settings" for details. ☛ See page 100.

❒ Crosshatched parts ( ) indicate factory-shipped settings.

1 Default Image Settings

No.: Function name	Description	Choices (range) and specification method
1: Default photo type (Photo mode) 2: Default phot type (Auto mode)	Changes the photo type which is specified immediately after powering on or when the Stand-by mode is cleared or the copier is reset automatically. ❒ The "1: Default photo type (Photo mode)" is specified when the Photo mode is selected with the "Original Image Type Selection" function. The "2: Default photo type (Auto L/P mode)" is specified when the Auto (Letter/Photo) mode is selected. ☛ See page 67, "Original Image Type Selection".	1 Printed 2 Glossy 3 Copied
3: Auto Mode Sensitivity	When in the Auto (Letter/Photo) mode, you can specify 9 levels of standard with which the copier identifies whether an image of an original is "Letter" or "Photo." ❒ The copier should be set to lean towards the "Letter" mode if the letter part is blurred or unclear, and the "Photo" mode if the edges of a copy are blackish when copying a photograph in which density changes largely.	1 Photo 2 ↑ 3 | 4 | 5 | 6 | 7 | 8 ↓ 9 Letter
4: Auto Image Density	The "Auto Image Density" function sets the copier to make copies in an appropriate background density. There are 4 levels. ❒ The "Full Color Copy" and "Black Copy/Single Color" modes can be adjusted separately. ❒ Use this function to adjust the level of background color erased automatically. When you specify a darker value, dark background colors are not erased easily. When you specify a lighter value, dark colors are erased easily.	1 Full color 2 B/W & Single Color 1 Light 2 ↑ 3 ↓ 4 Dark

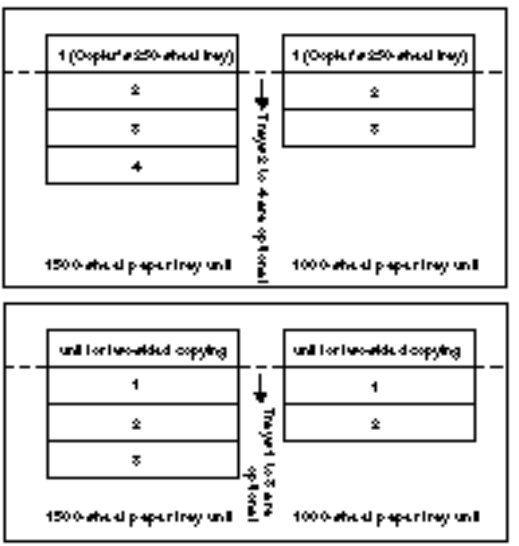
No.: Function name	Description	Choices (range) and specification method
5: U.C.R Adjustment (Black toner adjustment)	You can adjust the amount of black toner within 9 levels when making copies in full color. ❒ Specify a darker level when you want to copy letter parts clearly in black, and a lighter level if an entire image is blackish.	1 Weak 2 ↑ 3 | 4 | 5 | 6 | 7 | 8 ↓ 9 Strong
6: Auto Color Select Sensitivity (Auto color selection)	When in Auto Color Select mode, you can specify the level at which the copier identifies whether an image of an original is “Color” or “Black.” ❒ The copier easily identifies black originals when you specify a level close to “Black”, and color originals when you specify a level close to “Color.”	1 B/W 2 ↑ 3 | 4 ↓ 5 Color
7: Auto Color Select Mode Priority (Auto color selection)	When in Auto Color Select mode, you can set the copier to use either the “Black” or “Color” mode preferentially to make copies. ❒ Select the mode (Black or Color) used frequently to make copies in the Auto Color Select mode.	1 B/W 2 Full Color
8: Color Sensitivity (Color conversion)	You can adjust the width of colors before conversion within 5 levels. ❒ For example, when you specify yellow with the color width set to “Wide,” other colors close to yellow, such as orange and yellowish green, are also specified. When you set the color width to “Narrow,” only yellow is specified.	1 Narrow 2 ↑ 3 | 4 ↓ 5 Wide

2 Default Margin Settings

No.: Function name	Description	Choices (range) and specification method
1: Default Margin: Width	Changes the margin direction and width which are set immediately after powering on or when the Stand-by mode is cleared or the copier is reset automatically.	Specify in the range of 1 ~ 20 mm, 0.1" ~ 0.8" (in 1 mm, 0.1" steps) 0 mm
2: Side 2 Default Margin Width:	Changes the Side-2 margin direction and width which are set immediately after powering on or when the Stand-by mode is cleared or the copier is reset automatically.	Specify in the range of 1 ~ 20 mm, 0.1" ~ 0.8" (in 1 mm, 0.1" steps) 0 mm

No.: Function name	Description	Choices (range) and specification method
3: Auto Side 2 Margin Adjustment	When you make two-sided copies from one-sided originals, a right margin is set on the back side automatically. ❒ This function can be used only if your copier has a unit for two-sided copying.	1 On 2 Off
4: Auto Empty Duplex Tray	With a default setting, the first page of your copies will be delivered with one side blank when making two-sided copies from odd number of one-sided originals using the optional document feeder. You can cancel this setting and the last copy will instead be stored in the unit for two-sided copying until you press the **Start** key. ❒ This function can be used only if your copier has a unit for two-sided copying and optional document feeder.	1 On 2 Off

3 Paper Tray Settings

No.: Function name	Description	Choices (range) and specification method
1: Auto tray shift	Specifies whether to select another tray when paper runs out. ❒ This function can be used if you load paper of the same size and in the same direction in two or more paper trays. However, paper set in the bypass feed tray is excluded. ❒ For a paper tray for which remarked paper is specified with “5: Remarked Paper” in paper tray setting, limitless paper feed is performed only when the paper tray is set in the same condition as the other trays. ❒ This function cannot be used if the optional paper tray unit is not equipped with your copier.	1 On 2 Off
2: Paper Tray Priority	This function changes the paper tray which is selected immediately after powering on or when the Stand-by mode is cleared or the copier is reset automatically. The function also changes the paper tray which is selected preferentially when the Auto Paper Select mode is specified.  ❒ This function cannot be used if the optional paper tray unit is not equipped with your copier.	Select from trays 1 to 4. 1 Tray 1 2 Tray 2 3 Tray 3 4 Tray 4

<table>
<tr><th>No.: Function name</th><th>Description</th><th>Choices (range) and specification method</th></tr>
<tr><td>3: Paper size Selection</td><td>Selects the size of paper set in the optional paper tray unit.
❒ When using the optional paper tray unit, you must specify the paper size.
Important
❒ If the specified paper size differs from the size of paper actually set in the paper tray, a paper jam might occur because the paper size is not detected correctly.</td><td>① Select from trays 1 to 4.
See “Paper Tray Priority.” ☛ See page 106.
• For the optional paper tray unit
② Select the paper direction.
1 ▭
2 ▯
③ Select “Common” or “Special”.
1 Common
2 Special
• Metric version
“Common” ▭
1 A3
2 B4
3 A4
4 B5
5 11" x 17"
6 8½" x 11"
“Special” ▭
1 8" x 13"
2 8½" x 13"
3 8¼" x 13"
4 8" x 10"
▯
1 A4
2 B5
3 A5
4 8½" x 11"
5 8½" x 5½"
• Inch version
“Common” ▭
1 11" x 17"
2 8½" x 14"
3 8½" x 11"
4 8" x 13"
5 11" x 15"
6 10" x 14"
7 8" x 10½"
8 8" x 10"
“Special” ▭
1 A3
2 B4
3 A4
4 8½" x 11"
5 8½" x 5½"
▯
1 A4
2 A5
3 8½" x 11"
4 8½" x 5½"</td></tr>
<tr><td>4: Bypass Odd Size Memory</td><td>Specifies the paper size which is displayed when selecting “Odd size” for copying from the bypass feed table.
❒ For the paper length and width direction, refer to the illustration of step 3 in “COPYING FROM THE BYPASS FEED TABLE.” ☛ See page 70.</td><td>• Select a number (1 - 5) of an item you want to specify.
• Enter the paper size in the following ranges:
Width: 140~432 mm, 5.6"~17.0"
Length: 100 - 297 mm, 4.0"~11.7"
Width: 432 mm, 17.0"
Length: 297 mm, 11.6"</td></tr>
</table>

No.: Function name	Description	Choices (range) and specification method
5: Remarked Paper	Sets the guidance display to display the paper types set in each paper tray. ❒ When you specify a value for this function, follow the procedure shown below. ① Enter "1" and press the **Recall/Enter** key. ② Specify the paper tray (1 - 4) using the **Number** keys and press the **Recall/Enter** key. ❒ When you specify this function, the message "Remarked paper" is displayed on the guidance display.	① 1 On, 2 Off ② Select from trays 1 to 4. See "Paper Tray Priority." ☛ See page 106.

4 Basic User Settings

No.: Function name	Description	Choices (range) and specification method
1: Auto Paper Selection	Specifies whether to set the Auto Paper Select mode after powering on or when the Stand-by mode is cleared or the copier is reset automatically.	1 On, 2 Off
2: Color Mode Selection	Changes the color mode which is specified after powering on or when the Stand-by mode is cleared or the copier is reset automatically.	1 Auto, 2 Full Color, 3 B/W
3: Default Copy Mode (Original image type for full color)	Changes the original image type which is specified after powering on or when the Stand-by mode is cleared or the copier is reset automatically. You can change the setting depending on the color mode you select. ❒ Functions 3, 4, and 5 are set for the Full Color Copy, Black Copy/Single Color, and Auto Color Select functions, respectively.	1 Auto, 2 Letter, 3 Photo For "4: Default Copy Mode (Original image type for black copy and single color)," the factory-shipped value is "Letter."
4: Default Copy Mode (Original image type for black copy and single color)		
5: Default Copy Mode (Original image type for auto color selection)		

5 Operation Mode Settings

No.: Function name	Description	Choices (range) and specification method
1: Auto Reset	Changes the time after which the copier resets itself. You can also turn off this function.	1 On 2 Off Enter a value in the range of 10 to 900 seconds. 60 seconds
2: Stand-by	Specifies whether the copier enters the Stand-by condition at the same time as the Auto Reset function is executed.	1 On 2 Off
3: Beeper	The beeper can be set to on or off.	1 On 2 Off
4: Set User R/E	You can store up to 2 frequently used magnifications other than the fixed magnifications. You can also change a stored magnification. If you enter "0," this function remains undefined.	1 Ratio 1 2 Ratio 2 Enter a value in the range of 25 to 400 % (in 1 % steps). 100%
5: Counter (count up/ count down)	Specifies whether the copy counter shows the number of copies made or the number of copies remaining to be made. ❒ If you make copies at a specified magnification, use the **Enlarge** or **Reduce** key to select it.	1 Count Up 2 Down
6: Max. Copy Quantity	Changes the maximum number of copies that can be made consecutively.	Enter a value in the range of 1 to 99. 99 sheets

6 User Code Settings

No.: Function name	Description	Choices (range) and specification method
1: User Code Mode (Set accounting mode)	Specifies whether to manage the copier with user codes. ❒ To set the accounting mode, follow the procedure shown below. ① Enter "1" and press the **Recall/Enter** key. ② If you want to manage the copier with user codes when the color mode is set to "Full Color Copy," press the **Recall/Enter** key. If you do not use user codes, enter "2" and press the **Recall/Enter** key. ③ Specify whether to manage the copier with user codes when the color mode is set to "Single Color." ④ Specify whether to manage the copier with user codes when the color mode is set to "Black Copy." ❒ If no user code is registered, the item "3: User code number set" is displayed automatically.	① 1 On 2 Off ② 1 On 2 Off ③ 1 On 2 Off ④ 1 On 2 Off

6 User Code Settings

No.: Function name	Description	Choices (range) and specification method
2: Key Operator Access Code	Sets the key operator access code (6 digits or less) to operate the accounting mode. ❒ You can also register or change the key operator access code. ❒ When you have already registered the key operator access code, enter it and then press the **Recall/Enter** key to set the code number. ❒ When you specify "1: Set" for this function, you cannot use functions 1 to 8 in "6 Set Accounting Mode" unless you enter the key operator access code. ❒ If you cannot remember your access code, contact your service representative.	1 Set 2 No • Enter a code number in the range of 0 to 999999.
3: Input User Code (User code set)	Registers your user code number (6 digits or less). ❒ Enter your user code number (step ①) and specify color modes (steps ② to ④) in which your user code can be used. ❒ To register another code continuously, enter the code number. To quit the registration, press the **Recall/Enter** key.	① Enter a code number in the range of 0 to 999999. You can register up to 20 codes. ② Full Color Copy 1 On 2 Off ③ Single Color 1 On 2 Off ④ Black Copy 1 On 2 Off
4: Change User Code	Changes your present user code number (6 digits or less). ❒ Even if you change your user code number, the user code counter is not cleared.	• Enter the present user code number. • Enter a new user code number in the range of 0 to 999999.
5: Delete User Code	Deletes your user code (6 digits or less). ❒ If you delete your user code, the user code counter is cleared automatically.	1 All 2 Individual • Enter your user code number.

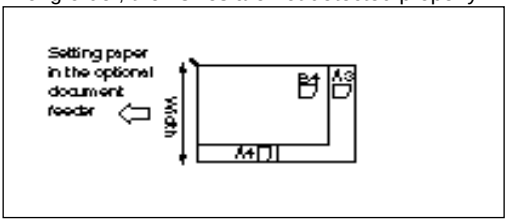
No.: Function name	Description	Choices (range) and specification method
6: User Code Counter	Shows the number of copies made using each user code. ❒ First, the counter for the Black Copy mode is displayed. When you press the **+ Up** key, the counters for the Single Color and Full Color Copy modes are displayed in that order. Then the counters for the next code are displayed. When you press the **– Down** key, the counters for the previous code are displayed. However, the counters are not displayed for color modes which are not allowed to use user codes.	• Use the **+ Up** and **– Down** keys to display the counters.
7: Print Counter	You can print data (number of copies made) for all user code counters. This data is printed on A4□, 8 1/2" x 11"□ paper. ❒ If the accounting mode is specified with the color mode set to Black Copy, you cannot print the user code counter unless you enter the user code available in the Black Copy mode.	• Press the **Start** key to print the counter data.
8: Reset User Code Counter	Resets each user code counter to "0."	1 All 2 Individual • Enter a user code number.

7 ADF/Sorter Settings

❒ This group is displayed only when your copier is equipped with the optional document feeder or sorter stapler.

❒ If your copier is equipped with the sorter stapler but not equipped with the document feeder, only function No. 1 ("Full Color Sorting") is displayed. If your copier is equipped with the document feeder but not equipped with the sorter stapler, "Full Color Sorting" is not displayed and only the document feeder functions are displayed. In this case, function numbers 1 to 5 are given to the document feeder functions (ADF: "Thin paper" - "ADF: Auto sort").

No.: Function name	Description	Choices (range) and specification method
1: Sorter: Full Color Sorting	You can set the copier to disable the Sort/Stack and Staple functions when you make copies in the Full Color Copy or Auto Color Select mode.	1 On 2 Off
2: ADF: Thin Paper Mode	Adjusts the optional document feeder so that thin originals (40 - 52 g/m², 10.7 - 13.8 lb) will not be damaged when they are set in the optional document feeder.	1 On 2 Off
3: SADF Auto Reset Time	When you set one original at a time in the optional document feeder, the next original is not fed automatically if you set it in the optional document feeder after a specified period of time. The SADF auto reset function changes this period of time.	• Enter a value in the range of 5 to 60 seconds (1 second steps). 20 seconds

No.: Function name	Description	Choices (range) and specification method
4: ADF: Free Size Setting	The optional document feeder can be programmed to take a mixture of documents of varying sizes and orientations. **Important** ❒ When setting different widths of originals, set the wider original under the narrower one. If you set them in a wrong order, their sizes are not detected properly.  ❒ It takes more time to copy originals of different sizes and directions because the original size is detected for each sheet. ❒ Small originals might be copied in a slanting direction because the guide cannot be adjusted to their sizes.	1 On 2 Off
5: ADF: APS Mode with ADF	Specifies whether to set the Auto Paper Select mode automatically when originals are set in the optional document feeder.	1 On 2 Off
6: ARDF Auto Sort Mode	Specifies whether to sort copies automatically when the number of originals and copies is two or more.	1 On 2 Off

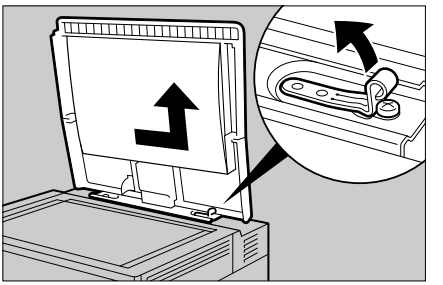
WHAT TO DO IF SOMETHING GOES WRONG

WHEN COPYING A LARGE ORIGINAL

You can copy originals larger than A3, 11" x 17", such as large maps and drawings, by removing the platen cover.

Removing the platen cover

1. Slide the platen cover to the right while pulling the pull on the platen cover. When the cover is unlocked, lift it to remove it from the copier.

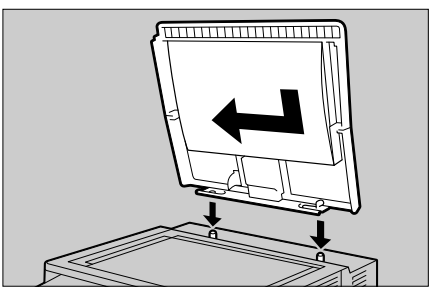


Important

❒ Lift the platen cover with both hands. Place the removed cover on a flat surface such as a desk and where it will not be damaged.

Attaching the platen cover

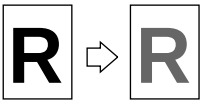
1. Fit the holes of the platen cover to the pins on the copier and slide the cover to the left.



IF YOU CANNOT MAKE COPIES AS YOU WANT

The following table shows the causes of problems and the corrective actions when you cannot make copies as you want.

Problem	Cause	Action
❒ Copies appear dirty.	• The image density is too dark.	• Adjust the image density. See page 65, "Image Density Adjustment".
		• Press the **Image Adjustment** key to adjust the background density. ☛ See page 33, "Background Density Control".
❒ The reverse side of an original image is copied.	• The image density is too dark.	• Adjust the image density. ☛ See page 65, "Image Density Adjustment".
		• Press the **Image Adjustment** key to adjust the background density. ☛ See page 33, "Background Density Control".
		• Copy the original with the same size of black paper laid under it.
❒ A shadow is copied when copying a pasted original.	• The image density is too dark.	• Adjust the image density. ☛ See page 65, "Image Density Adjustment".
		• Set the original in a different direction.
		• Put mending tape on the bound part.
❒ An image not on the original appears on the copy.	• The exposure glass (platen glass), platen cover, or optional document feeder belt is dirty.	• Clean them. ☛ See page 143, "MAINTAINING YOUR COPIER".
❒ A copy image is blurred.	• The image density is too light.	• Adjust the image density. ☛ See page 65, "Image Density Adjustment".
	• An improper kind of paper is set.	• Set the right kind of paper in the paper tray. • Copies might be blurred if you copy onto rough grain, coated, or damp paper.
	• Toner is running out.	• Replace the toner as soon as possible. ☛ See page 119, "IS LIT OR BLINKING: ADDING TONER".
❒ Parts of an image are not copied.	• The original is not set correctly.	• Set the original correctly. ☛ See page 60, "SETTING ORIGINALS".
	• An improper paper size is selected.	• Select the proper paper size. ☛ See page 68, "Copy Paper Selection".
	• The specified magnification is too large or a size of paper which does not fit the magnification is set.	• Reduce the magnification or set a suitable size of paper that fits the magnification.

Problem	Cause	Action
❒ An original image is not copied.	• The reverse side of the original is set.	• Set the original face down on the exposure glass (platen glass), and face up in the optional document feeder. ☛ See page 60, “SETTING ORIGINALS”.
❒ A moire pattern is produced on copies. 	• Moire patterns are produced due to an overlap of grid points or lines arranged regularly in processing an image.	• You might be able to avoid moire patterns by slanting an original slightly when setting it.
		• When the original image type is set to “Letter,” change the setting to “Auto (Letter/Photo)” or “Photo.”
		• Enter the “Sharp/Soft” mode with the **Image Adjustment** key and set the value to a softer setting. ☛ See page 36, “Sharp/Soft”.
❒ The color tone of copies is different from that of originals.	• The color balance is thrown off.	• Press the **Color Balance Adjustment** key to adjust the color tones. ☛ See page 29, “COLOR BALANCE ADJUSTMENT”.
❒ The color tone of copies is completely different from that of originals.	————	• Contact your service representative.
❒ A copy image is unclear.	• An improper original image type is selected.	Specify the original image type as follows: • To copy the letter area of an original (e.g., a map) clearly: “Letter” • To copy an original with mixed photo and letter areas: “Auto (Letter/Photo)” • To copy a photo or picture original: “Photo”
		• Enter the “Sharp/Soft” mode with the **Image Adjustment** key and set the value to a sharper setting. ☛ See page 36, “Sharp/Soft”.
❒ Letter and photo areas are not separated and the text or photographs are not copied clearly.	• Letters consisting of grid points or light-density letters are copied.	• Use the user tool “Auto Mode Sensitivity” to set the value closer to “Letter” for the standard with which the copier identifies whether an image of an original is “Letter” or “Photo.” See page 103, “USER TOOLS, Auto Mode Sensitivity”.
	• High-contrast photographs are copied.	• Use the user tool “Auto Mode Sensitivity” to set the value closer to “Photo” for the standard with which the copier identifies whether an image of an original is “Letter” or “Photo.” See page 103, “USER TOOLS, Auto Mode Sensitivity”.
	• Photographs consisting of thin lines arranged continuously at narrow intervals are copied.	

Problem	Cause	Action
❒ Color areas of an original are copied in black when the Auto Color Select mode is selected.	• The original contains an area of color that is too small or too thin.	• Use the user tool “Auto color select” to set the value closer to “Color” for the standard with which the copier identifies whether an image of an original is “Color” or “Black.” See page 104, “USER TOOLS, Auto color select (Auto color selection)”.
❒ A black and white original is copied in color when the Auto Color Select mode is selected.	• An original of which background has a light color (e.g., a newspaper and color paper) is copied.	• Use the user tool “Auto color select” to set the value closer to “Black” for the standard with which the copier identifies whether an image of an original is “Color” or “Black.” See page 104, “USER TOOLS, Auto color select (Auto color selection)”.

IS LIT: LOADING PAPER

This section describes the procedure for loading paper when the paper tray runs out of paper.

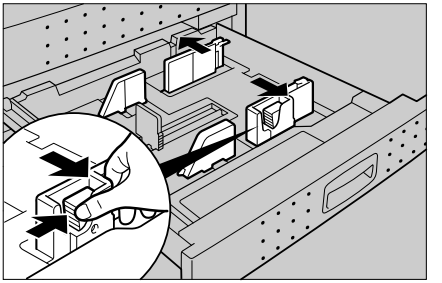
❒ For details of paper such as types and sizes that can be set, see “PAPER.” ☛ See page 45.

❒ You can change the paper size. ☛ See page 50, “CHANGING PAPER SIZE”.

1 Pull out the tray for which paper loading is indicated.

2 While pressing the release levers on the front and rear guides, slide the front and rear guides outward.

❒ The copier’s 250-sheet tray has the front and rear guides. Move both of them at a time.

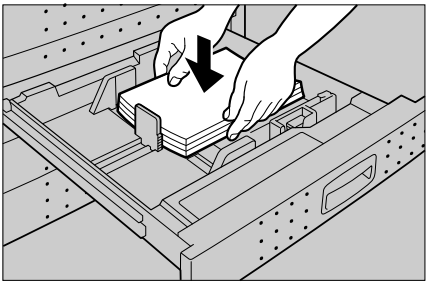


3 Square the paper and set it in the tray.

Important

❒ Do not stack paper over the limit mark.

❒ Shuffle the paper before setting it in the tray.



4 While pressing the release levers on the front and rear guides, slide the front and rear guides to the paper size you want to use.

5 Push the paper tray in until it stops.

IS LIT OR BLINKING: ADDING TONER

This section describes the procedure for adding toner when little or no toner remains.

Warning

- Do not incinerate the used toner container. Toner dust might ignite when exposed to open flame.
  Dispose of the used toner container according to local regulations.

Important

❒ When replacing the toner container, do not turn off the power. If you turn off the power, specified functions and number of copies are cleared and you cannot continue copying.

❒ You cannot reuse once-used toner.

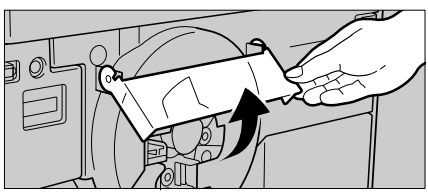
❒ Even if blinks to show that little toner remains, you can make about 10 copies. However, you should replace the toner as soon as possible because copies might be blurred.

❒ is lit if no toner remains. In this case, you cannot make any copy.

❒ When is lit or blinking, open the front cover and close it.
The copier will check the remaining toner amount again. If is still lit or blinking, replace the toner cartridge.

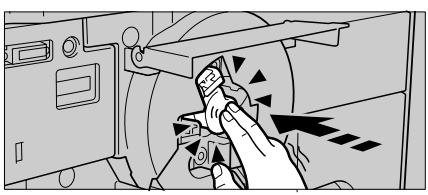
Adding Black Toner

1. Open the copier's front cover gently; pull it towards you while holding the left and right knobs with both hands.

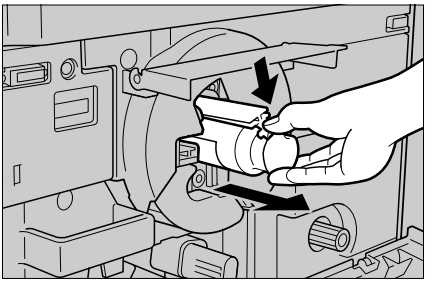


2. Open the clear cover.

3. Tap the toner cartridge lightly two or three times.



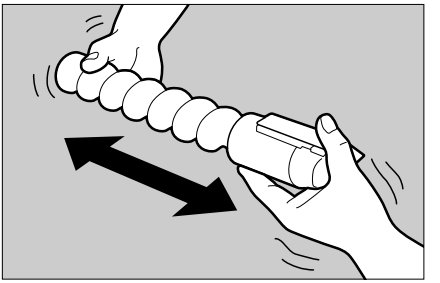
4 Pull out the toner cartridge while holding the hook.



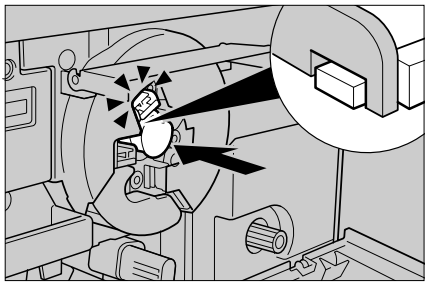
Important

❒ To prevent the toner from spilling out, you must pull the toner cartridge straight out in the horizontal direction and must not rotate it.

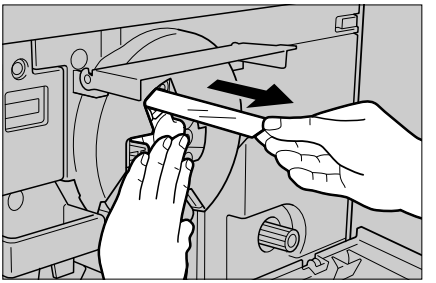
5 Shake the new cartridge left and right 10 to 15 times to make the toner spread evenly.



6 Insert the toner cartridge into the copier with the seal face up until it clicks.



7 Remove the seal while pressing the toner cartridge.



8 Close the clear cover. Then close the copier's front cover by pressing the left and right knobs with both hands.

❒ goes off.

❒ Do not open the front cover until the message "Please wait" disappears.

If is blinking or lit again.

Replace another toner cartridge.

Add XXXXX toner
Disregard toner indicator –> #

❒ When you replace another toner cartridge, see "Adding Color Toner." ☞ See below.

❒ When you do not wish to replace another toner cartridge, press the **Recall/Enter** key to resume copying.

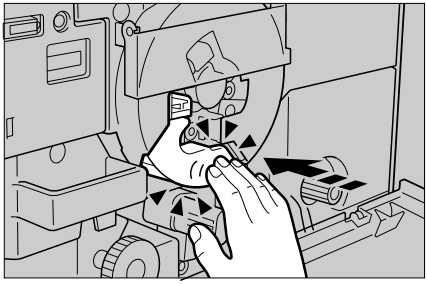
Adding Color Toner

❒ When is lit, open the front cover and close it. Add toner only if is lit again.

❒ When adding toner, be sure to confirm the toner color.

1 Open the copier's front cover gently; pull it towards you while holding the left and right knobs with both hands.

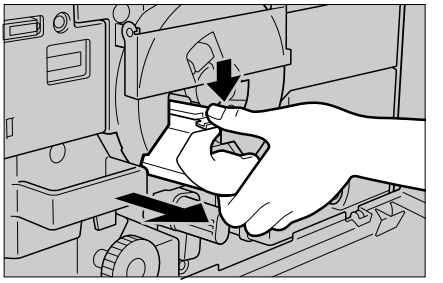
2 Tap the toner cartridge lightly two or three times.



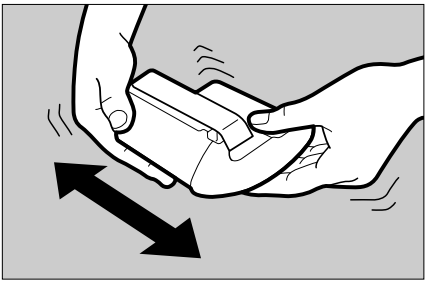
3 Pull out the toner cartridge while holding the hook.

Important

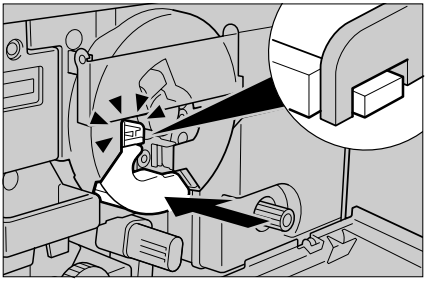
❒ To prevent the toner from spilling out, you must pull the toner cartridge straight out in the horizontal direction and must not rotate it.



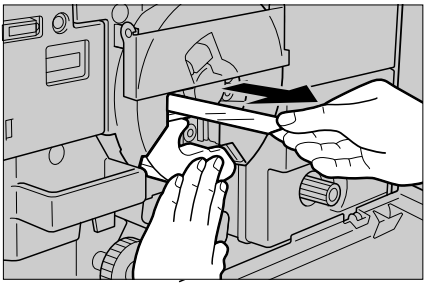
4 Shake a new cartridge left and right 10 to 15 times to make the toner spread evenly.



5 Insert the toner cartridge into the copier until it clicks.



6 Remove the seal while pressing the toner cartridge.



7 Press the left and right knobs with both hands to close the front cover.

❒ goes off.

❒ Do not open the front cover until the message “Please wait” disappears.

If does not go out, replace another toner cartridge:

❒ To replace another color cartridge, return to step 1.

❒ To replace the black toner cartridge, see page 119.

❒ When you replace another color toner cartridge continuously, go back to step 1. When you replace the black toner cartridge, see “Adding Black Toner.” ☛ See page 109.

❒ When you do not replace another toner cartridge and resume copying, press the **Recall/Enter** key.

Add XXXXX Toner
Disregard toner indicator –> #

IS LIT: CLEARING MISFEEDS

If an original or paper misfeed occurs, one or more misfeed locations are displayed on the operation panel. This section describes the procedure for clearing misfeeds.

Caution

- Since some parts of the copier are supplied with high electrical voltage, touch only parts specified in the instructions on the stickers inside the machine's cover.

Important
When clearing misfeeds, do not turn off the power. If you turn off the power, specified functions and number of copies are cleared.

Important
Do not tear misfed paper when removeing it. If a piece of paper remains in the copier, a paper misfeed might recur or another failure might occur.

Important
If a paper misfeed occurs repeatedly, contact your service representative.

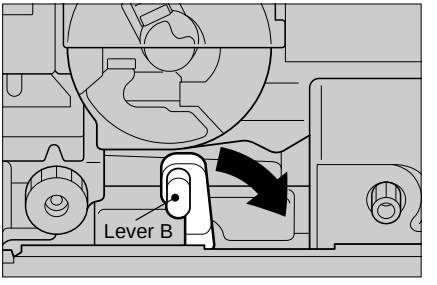
❒ Two or more misfeed locations might be displayed at a time. In this case, check all the displayed locations.

❒ You can find a sticker explaining how to remove misfed paper inside the copier's front cover.

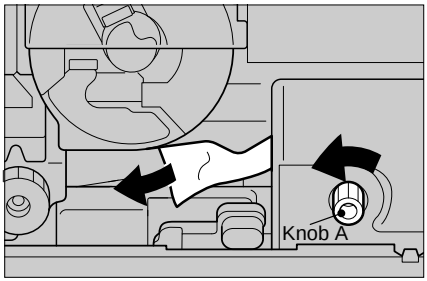
When A and/or B Is Lit

1. Open the copier's front cover gently; pull it towards you while holding the left and right knobs with both hands.

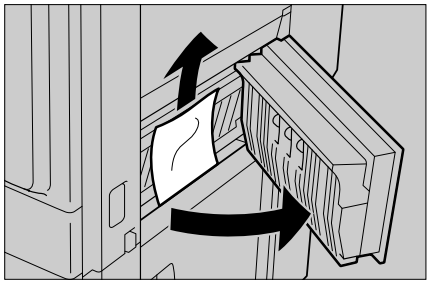
2. Pull lever B to the right.



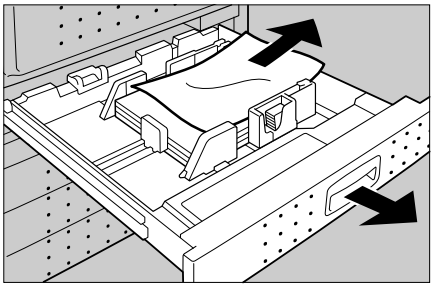
3 Remove misfed paper while rotating knob A counterclockwise.



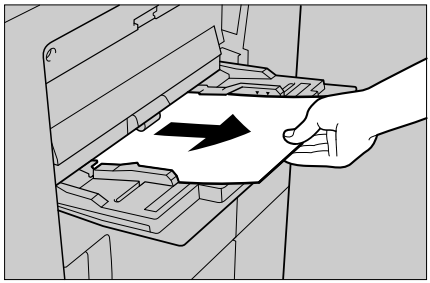
4 If you cannot find the misfed paper by rotating knob A, open the right side cover and remove misfed paper.



5 If you cannot find the misfed paper by opening the right side cover, pull the paper tray and remove misfed paper.



6 If a paper misfeed occurs in the bypass feed table when you copy from it, remove the misfeeds from the bypass feed table.



7 Return lever B to the original position.

8 Close the copier's front cover by pressing the left and right knobs with both hands.

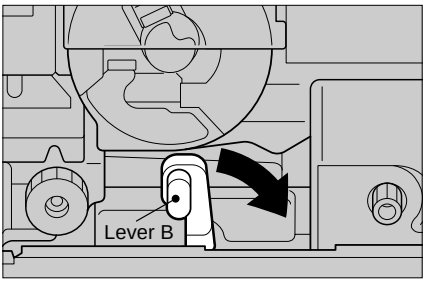
9 If you opened the right side cover, close it.

❒ The **Start** key turns green.

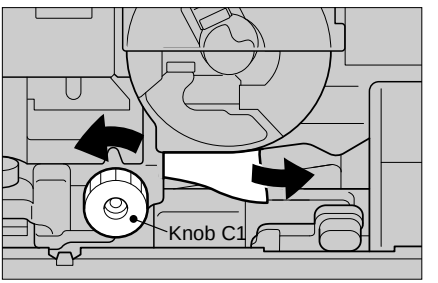
When C Is Lit

1 Open the copier's front cover gently; pull it towards you while holding the left and right knobs with both hands.

2 Pull lever B to the right.

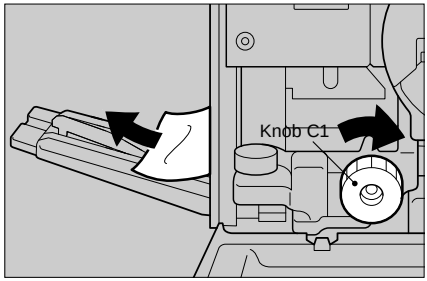


3 Remove the misfed paper while rotating knob C1 counterclockwise.



4 If misfed paper is not fed, rotate knob C1 clockwise and remove misfeeds.

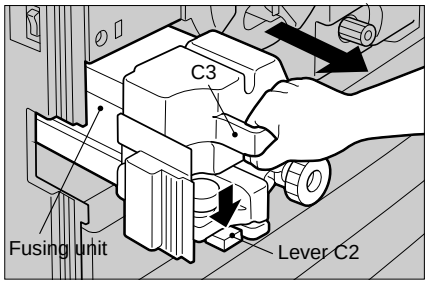
❒ When your copier is equipped with the sorter stapler (option), see "When R Is Lit." ☛ See page 130.



5 If misfed paper is not fed by rotating knob C1, hold grip C3 while pressing lever C2 to pull out the fusing unit.

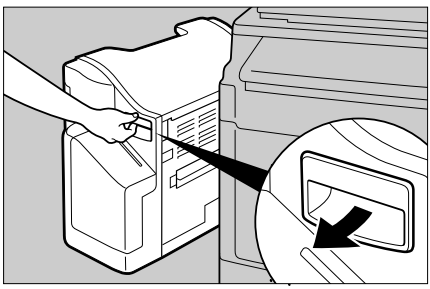
⚠ *Caution*

- The fusing unit is very hot. Do not touch any part other than lever C2 and grip C3. Otherwise, a burn might occur.



When your copier is equipped with the sorter stapler (option)

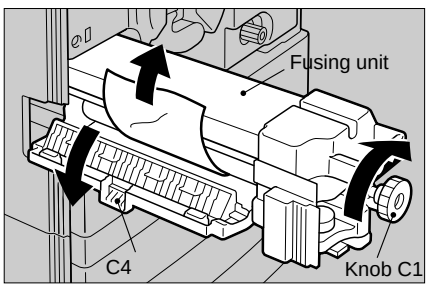
❶ Unlock the sorter stapler by pulling the grip inside. Then open the sorter stapler.



6 Pull C4 to the left and rotate knob C1 clockwise to remove misfed paper.

⚠ *Caution*

- The fusing unit is very hot. Do not touch any part other than knob C1 and C4. Otherwise, a burn might occur.



7 Return the C4 to the original position. Then press grip C3 to return the fusing unit to the original position.

❒ Press the fusing unit into the copier lightly until it stops.

8 Return lever B to the original position.

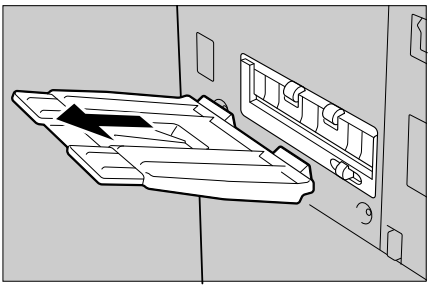
❒ If you opened the sorter stapler, close it.

9 Close the copier's front cover by pressing the left and right knobs with both hands.

❒ The **Start** key turns green.

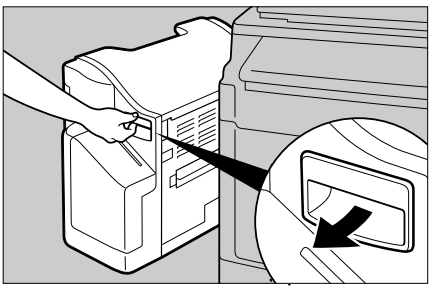
When D Is Lit

1 Remove the copy tray from the copier.

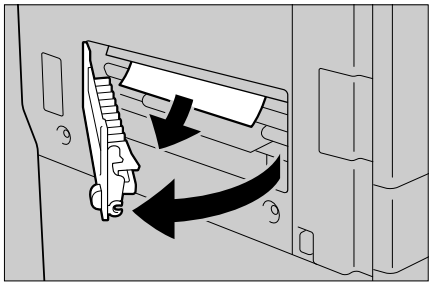


When the copier is equipped with the sorter stapler (option):

❶ Unlock the sorter stapler by pulling the grip from inside. Open the sorter stapler.



2 Open the cover by pulling knob D, and remove misfed paper.



3 Close the cover and return the copy tray to the original position.

❒ The **Start** key turns green.

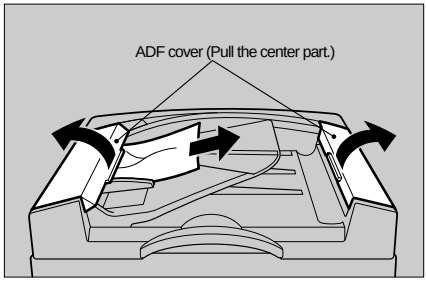
❒ If you opened the sorter stapler, close it.

When P Is Lit

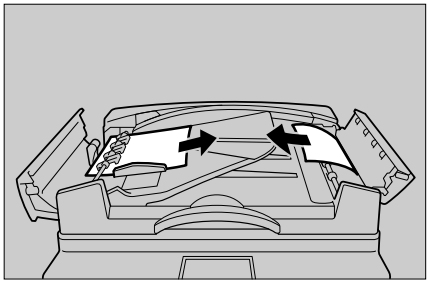
1 Remove the originals from the optional document feeder and open the ADF cover.

Important

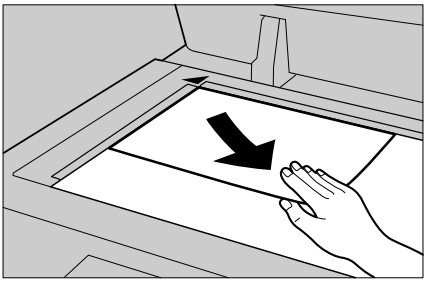
❒ When opening the ADF covers, pull their center parts. If you pull the edges, a failure might occur.



2 Remove misfed paper.



3 Lift the optional document feeder and remove the original from the exposure glass (platen glass).



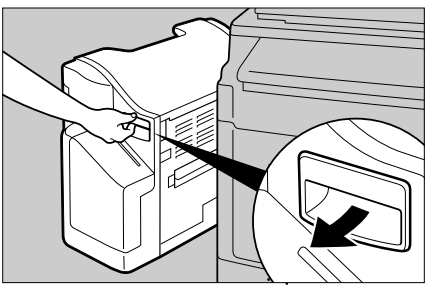
4 Close the ADF covers.

❒ The **Start** key turns green.

When R Is Lit

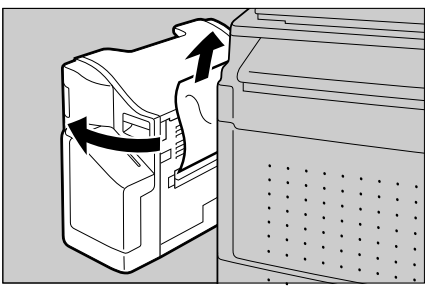
❒ A staple jam might occur when you are performing stapling. In such a case, remove the jammed staples. ☛ See page 134.

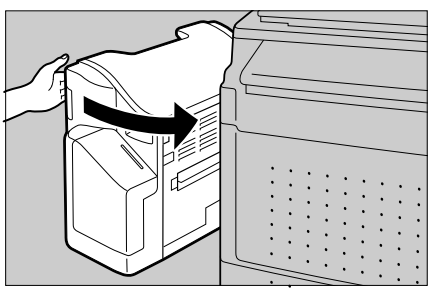
1 Unlock the sorter stapler (option) by pulling the grip inside.



2 Open the sorter stapler and remove misfed paper.

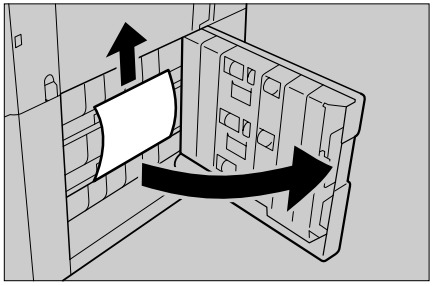
3 Close the sorter stapler by pressing it until it clicks.





When Y Is Lit

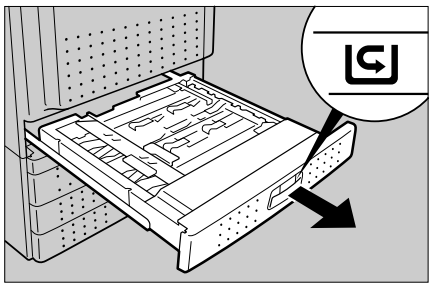
1 Open the right side cover of the optional paper tray unit and remove misfed paper.



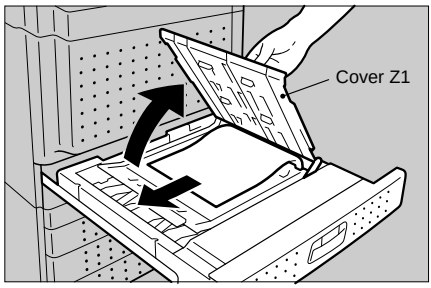
2 Close the right side cover.

When Z Is Lit

1 Pull out the two-sided copying tray until it stops.



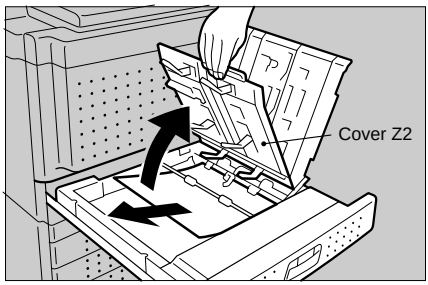
2 Lift cover Z1 and remove misfed paper.



3 If there is no misfeed in Z1, lift cover Z2 and remove misfed paper.

4 Lower the covers Z1 and Z2 and push the two-sided copying tray in until it stopes.

❒ The **Start** key turns green.

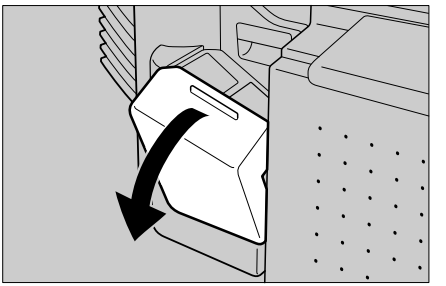


IS LIT: ADDING STAPLES

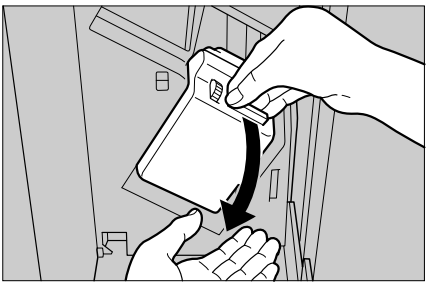
This section describes the procedure for replacing the staple cartridge when the sorter stapler (option) runs out of staples.

❒ Even when you specify the “Staple” function after replacing the staple cartridge, copies are not stapled but nipped without staples 5 to 7 times while the sorter stapler is adjusting the staple sheet position.

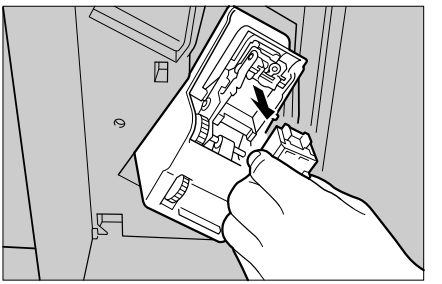
1 Open the front cover of the sorter stapler.



2 Pull down the staple unit.

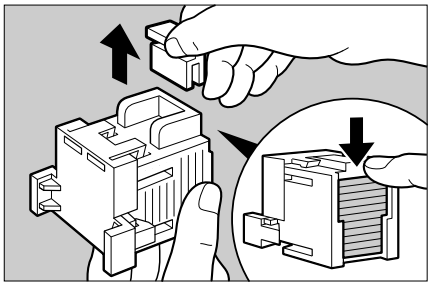


3 Remove the staple cartridge from the unit.



4 Pull out the stopper from a new cartridge with the top of the cartridge face up.

❒ If you remove the stopper with the top of the cartridge face down, staple sheets might fall out off the cartridge.



Important

❒ If any staple sheets extend from the mouth of the new staple cartridge, press them back into the cartridge. If you set the cartridge with staple sheets extending, a staple sheet jam might occur.

5 Set the staple cartridge in the staple unit.

❒ Press the cartridge with its top face up until it clicks.

6 Return the staple unit to the original position.

7 Close the front cover of the sorter stapler.

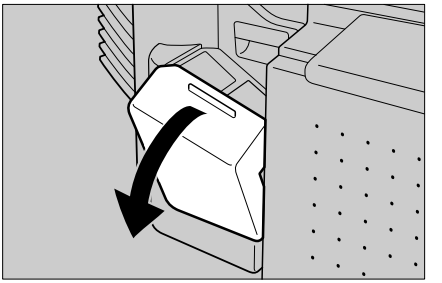
❒ goes off and the **Start** key turns green.

REMOVING JAMMED STAPLES

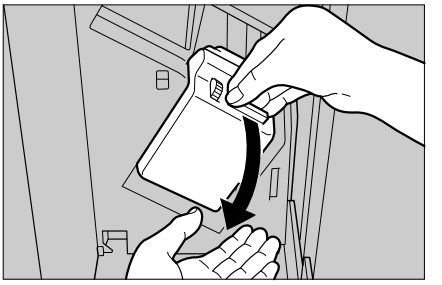
This section describes the procedure for removing staples jammed in the sorter stapler (option).

- ❒ Staples might be jammed repeatedly due to bent paper. In this case, set the paper upside down.
- ❒ Even when you resume a “Staple” operation after removing jammed staples, copies are not stapled but nipped without staples 5 to 7 times while the sorter stapler is adjusting the staple sheet position.

1 Open the front cover of the sorter stapler.



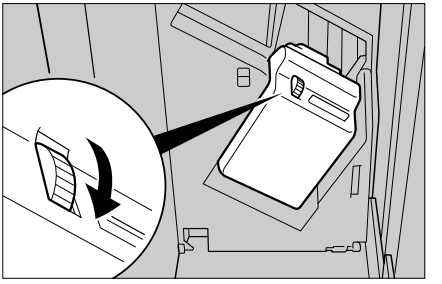
2 Pull down the staple unit.



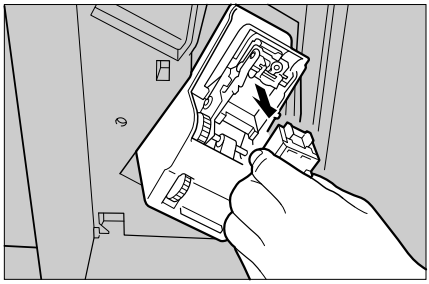
If you cannot pull down the staple unit

❶ Rotate the knob downward 8 to 9 times.
This separates the staple unit and paper so that the staple unit can be pulled down.

❷ Pull down the staple unit.

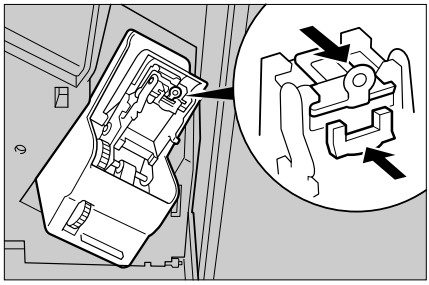


3 Remove the staple cartridge from the unit.



4 Pull down the staple cover while pressing the hook.

❒ If you cannot pull the staple cover, rotate the knob on the staple unit 7 to 8 times as described in step ❶.

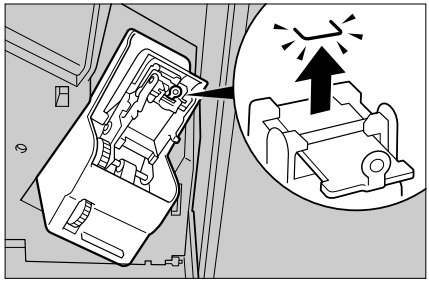


5 Remove jammed staples and staple sheets.

Important

❒ Remove the jammed staples and staple sheets carefully without applying an excessive force.

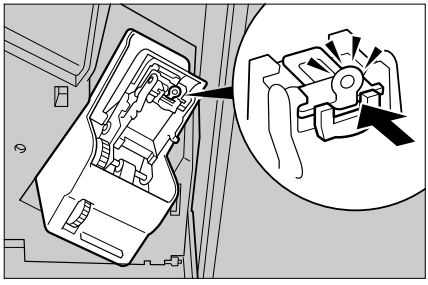
❒ Staples might be removed together with staple sheets.



6 Close the staple cover by pressing it until it clicks.

Important

❒ If you do not close the staple cover completely, copies might be nipped without staples or a paper jam might occur.



7 Set the staple cartridge in the staple unit.

Important

- ❒ If any staple sheets extend from the mouth of the new staple cartridge, press them back into the cartridge. If you set the cartridge with staple sheets extending, a staple sheet jam might occur.
- ❒ Do not set the removed staples or staple sheets in the cartridge again. They cannot be used for stapling.
- ❒ Press the cartridge with its top face up until it clicks.
- ❒ If you cannot set the cartridge in the unit, go back to step 6 and close the staple cover completely. Then set the staple cartridge.

8 Return the staple unit to the original position.

9 Close the front cover of the sorter stapler.

- ❒ The **Start** key turns green.
- ❒ When you press the **Sorter** key, a staple operation resumes but copies are nipped without staples while the sorter stapler is adjusting the staple sheet position.

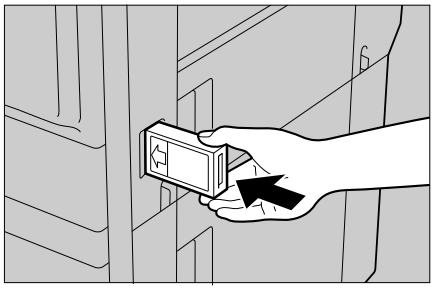
SETTING KEY COUNTER

This section describes the procedure for setting the key counter.

❒ The key counter is an optional equipment.

Setting The Key Counter

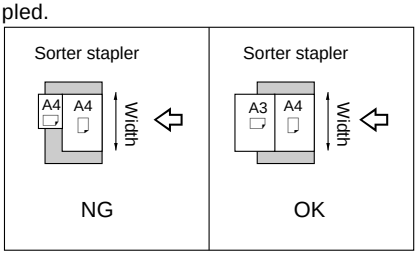
1. Set the key counter with its label facing forward in the key counter slot on the right side of the copier.



IF AN ERROR MESSAGE IS DISPLAYED

If you specify a wrong setting or a value exceeding the limit, an error message is displayed in the guidance display. The following table shows the corrective action to be taken if an error message is displayed.

Message	State/Cause	Action
❒ The **Clear Modes/ Stand-by** key is lit and the guidance display is turned off.	• The copier is in the Stand-by condition.	• Press the **Clear Modes/Stand-by** key.
❒ The message "Please wait" is lit.	• This message is displayed when setting the main switch to "On" or after adding toner.	• Wait for a while. • When the guidance display shows that the Auto Start function is enabled, you can preset copy settings. ☛ See page 55, "Auto Start". • When you set the main switch to "On," it takes about 6 minutes for the copier to enter the ready condition.
	• About 50 copies are made.	• This message is displayed for about 17 or 11 seconds to maintain the image quality when 50 copies are made. Wait for a while. If the message is displayed for 4 seconds, it also appears during a copy run and the copy run is restarted automatically. • This message might be displayed for 11 seconds even when less than 50 copies are made.
	• About 150 copies are made.	• This message is displayed for about 120 ~ 180 seconds or 17 seconds to maintain the image quality when 150 copies are made. Wait for a while. • This message is displayed for about 15 seconds only when the optional document feeder is used.
	• Originals with large letter or photo areas are copied.	• This message is displayed for about 47 seconds when you make about 50 copies of originals with large letter or photo areas. Even when the message is displayed during a copy run, the copy run is restarted automatically. • This message might be displayed for some original types even when less than 50 copies are made.

Message	State/Cause	Action
❒ Cannot detect original size	• An improper size of originals is set. ☛ See page 43, "Original Sizes Difficult To Detect".	• If an improper size of originals is set, select the paper size using the **Paper Selection** key instead of the "Auto Paper Select" function, and reduce/enlarge copies using a method other than the "Auto Reduce/Enlarge" function. When you press the **Start** key, the originals are copied onto the paper selected currently.
	• No original is set.	• Set your originals.
	• The "Centering" function is specified.	• Lift and lower the platen cover or optional document feeder and press the **Start** key.
❒ Check direction of original	• The paper direction differs from the original direction.	• Set the originals in the same direction as the copy paper.
		• When you press the **Start** key, the originals are copied onto the paper selected currently.
❒ Check paper size and direction	• The selected paper size does not fit the specified magnification.	• Set the proper size of paper that fits the magnification. When you press the **Start** key, however, the originals are copied onto the paper selected currently.
❒ Cannot sort/stack xxx paper or smaller	• The selected size of paper cannot be sorted.	• Select the proper paper size. ☛ See page 181.
	• The selected size of paper cannot be stacked.	• Select the proper paper size. ☛ See page 181.
❒ Staple mode is off	• Different width of copies are sorted.	• Only the same width of paper can be stapled. 
❒ Staple mode is off	• Only one original is set in the optional document feeder .	• The Staple operation cannot be performed if only one original is set. Check the number of originals.
❒ Cannot stapling xxx paper or smaller	• The selected size of paper cannot be stapled.	• Select the proper paper size. ☛ See page 181.

Message	State/Cause	Action
❒ Maximum number of sets is xx	• The specified number of copies exceeds the maximum quantity.	• You can change the maximum number of copies that can be made at a time. ☛ See page 109, "USER TOOLS, Maximum copy quantity set".
❒ Sorter bins are full Remove copies	• The quantity of loaded paper exceeds the maximum paper quantity that can be loaded in a paper tray.	• The maximum paper quantity that can be loaded in a paper tray is 25 sheets for B4, 8 1/2" x 14" size or larger, and 30 sheets for A4, 8 1/2" x 11" size or smaller.
❒ Check 1st tray	• The paper size does not match the size mark.	• If you align paper with a wrong size mark, the error message appears. Set the paper correctly. ☛ See page 50.
❒ Used toner bottle nearly full	• The used toner container is almost full.	• Contact your service representative. Your service representative replaces the used toner bottle.
❒ Used Toner Bottle Full Call service	• The used toner container is full.	
❒ Open front cover and set toner cartridge	• The toner cartridge is not set.	• Set the toner cartridge. ☛ See page 119, "IS LIT OR BLINKING: ADDING TONER".
❒ Cover open Reset sorter unit	• The sorter stapler is opened.	• Close the sorter stapler. ☛ See page 130, step 3 in "When R Is Lit".
❒ Cover open Close sorter cover	• The front cover of the sorter stapler is opened.	• Close the front cover. For the location of the front cover of the sorter stapler, see the illustration for step 1 in "IS LIT: ADDING STAPLES." ☛ See page 132.

If an error message not described above is displayed, follow the instruction shown in the message.

IF YOUR COPIER DOES NOT OPERATE AS YOU WANT

The following table shows the causes of problems and the corrective actions when your copier does not operate as you want.

Problem	Cause	Action
❒ Misfeeds occur frequently.	• An improper paper size is selected.	• Select the proper paper size. ☛ See page 50, “CHANGING PAPER SIZE”.
❒ When two or more functions are specified, some functions are not executed.	• Functions that cannot be combined are specified.	• Confirm the function combination and specify another one. ☛ See page 63, “FUNCTION COMBINATION CHART”.

Staple

Problem	Cause	Action
❒ Staples do not come out at all.	• There are jammed staples in the stapler.	• Remove the jammed staples from the stapler. ☛ See page 134, “REMOVING JAMMED STAPLES”. • After removing jammed staples, copies are not stapled but nipped without staples while the sorter stapler is adjusting the staple sheet position.
	• The specified number of copies exceeds the maximum quantity that can be stapled.	• Up to 20 copies can be stapled at a time.
❒ The stapling position is wrong.	• The originals are set in a wrong direction.	• Align the top of the originals to the scale on the rear side. ☛ See page 90, “Staple”.

Margin Adjustment

Problem	Cause	Action
❒ Parts of an image are not copied.	• The specified margin width is too large.	• Specify a smaller margin width. You can specify it in the range of 1 to 20 mm. ☛ See page 81, “Margin Adjustment”.
	• The margin is too narrow on the opposite side of the original binding margin.	

Combine 2 Originals

Problem	Cause	Action
❒ Parts of an image are not copied, or an unnecessary margin is made.	• Originals larger than A4, 8 1/2" x 11" are set.	• Set A4, B5, A5, B6, 8 1/2" x 11" or 5 1/2" x 8 1/2" originals.
	• The selected paper size does not fit the original size.	• Confirm the paper size that fits the original size. ☛ See page 85, "Combine 2 Originals". • You can reduce/enlarge and combine copies after determining the magnification.
	• Originals of different sizes and directions are set.	• Originals of different sizes and directions cannot be combined. Copy them to make the originals of the same size before you combine them.
❒ Copies are made in a wrong order.	• Originals are set in a wrong order.	• Set the originals with the first sheet placed on their top. ☛ See page 85, "Combine 2 Originals".

MAINTAINING YOUR COPIER

WHERE TO PUT YOUR COPIER

DO'S AND DON'TS

DO'S AND DON'TS

❒ While copying, do not turn off the main switch. When you turn off the copier, confirm that all copy runs have finished.

❒ When the main switch is in the Stand-by position, the anticondensation heaters are on. In case of emergency, unplug the machine's power cord.

⚠ *Caution*

- When the copier will not be used for a long period, disconnect the power cord.

❒ While copying, do not turn off the main switch.

❒ While copying, do not open the doors or covers.

❒ While copying, do not lift the document feeder.

❒ While copying, do not unplug the power cord.

❒ Do not lay anything weighing more than 10 kg, 22 lb on the exposure glass (platen glass).

❒ Do not place tools or other hard objects on the exposure glass (platen glass).

❒ Keep corrosive liquids, such as acid, off the machine.

❒ Do not allow paper clips, staples, or other small metallic objects to fall inside the machine.

❒ Do not use paper that has been copied onto by this machine in other office equipment. A fault might occur.

Storing Color Copies

❒ Colors of copies made with this copier fade as those of ordinary color prints do. However, you should keep copies with a binder or keep them away from the direct sunlight when you store them for a long time.

❒ If you overlay a copy on a wet print, the toner might be fused.

❒ If you paste copies using a solvent adhesive, the toner might be fused.

❒ If you fold a copy, the toner of the folded part might come off.

❒ If you bind copies with a vinyl chloride mat in a hot location for a long time, the toner might be fused.

❒ If you keep copies in an excessively hot location due to a heater or other factor, the toner might be fused.

WHERE TO PUT YOUR COPIER

When you move the copier if your division changes the equipment layout or moves to another location, follow the precautions shown below.

When Moving The Copier To The Same Level

⚠ *Caution*

- When you move the copier, unplug the power cord from the wall outlet. Otherwise, the cord might be damaged to cause a fire or electric shock.

- When you move the copier, be sure to pull out the four knobs from the left and right sides of the body. If you pull the knobs incompletely or hold parts other than the knobs, you might be injured (e.g., your fingers are nipped). When you have moved the copier, return the knobs to the original positions.
- When the copier is equipped with the optional paper tray unit, do not press the top side of the copier excessively. If you do, the paper tray unit might become detached from the copier and you might be injured.

❒ If the copier must be transported by vehicle, please contact your service representative.

❒ When you move the copier a short distance, follow the precautions shown below.

◆ Turn off the power.

◆ Pull the main plug to disconnect the power source.

◆ When the projector unit is installed, do not pull it to move the copier.

◆ Close the front cover, right side cover, and bypass feed table.

◆ Move the copier gently keeping it level. If you shake or slant it, a failure might occur.

Copier Environment After Moving

⚠ *Caution*

- Keep the copier away from humidity and dust. Otherwise, a fire or electric shock might occur.
- The copier must be level within 5 mm, 0.2" both front to rear and left to right.

⚠ *Caution*

- After you move the copier, fix it with the caster fixture. Otherwise, the copier might move or fall causing a personal injury.

Do not move the copier to the following locations. If you move the copier to an improper location, copies cannot be made normally or a failure might occur.

❒ Excessively cold and dry or hot and humid location

The optimum environmental conditions are as follows.
- Temperature: 10 - 30°C, 50 - 86°F
- Humidity: 15 - 90 %

❒ Location subject to direct sunlight or strong light (more than 2,000 lux.)

❒ Location near an air conditioner or humidifier

❒ Location subject to vibration

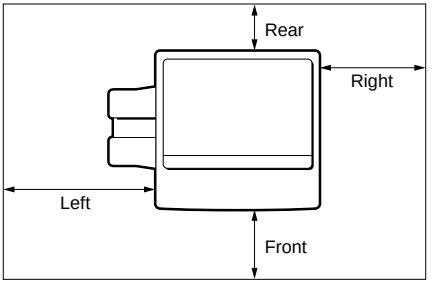
❒ Location with bad ventilation

❒ Location subject to dust

❒ Unstable floor or base
- Place the copier in a flat location. The copier must be level within 5 mm, 0.2" both front to rear and left to right.
- Place the copier on a stable floor. When you place it on a base, select a stable one such as a table dedicated to copiers (the table surface must be larger than the copier size).

Space Required for Installing The Copier

Leave enough space around the copier. This space is necessary for you to operate the copier or a service representative to work. When the copier is equipped with options, leave space around the options as shown in the illustration below.



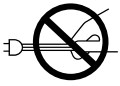
	Standard setting
Front	70 cm, 27.6"
Rear	10 cm, 4.0"
Left	42 cm, 16.4"
Right	40 cm, 15.8"

Power Connection

Warning

- Connect the copier to a power source meeting the specifications given on the inside front cover of this manual. Avoid multiwiring. Otherwise, a fire or electric shock might occur.
- Avoid using an extension cord.
- Do not set anything on the power cord.

- Make sure that the wall outlet is near the copier and easily accessible.



- To disconnect the power source, the main plug must be pulled.

- When the copier will not be used for a long period, disconnect the power cord.

❒ Connect the power plug to the wall outlet firmly in a direct way.

MAINTAINING YOUR COPIER

If the exposure glass (platen glass), platen cover, or ADF (option) belt is dirty, you cannot make copies as you want. Clean them if you find them dirty.

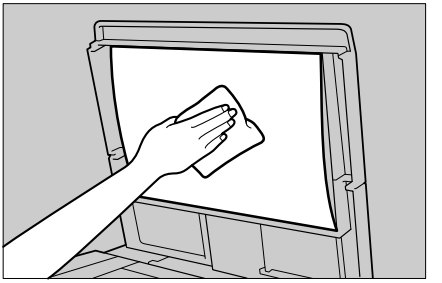
❒ Cleaning the copier
Wipe the copier with a soft, damp cloth.
After wiping the copier with a damp cloth, wipe it with a dry cloth to remove the water.

Important

❒ Do not use any chemical cleaner or organic solvent such as thinner and benzine. If they get into the copier or melt plastic parts, a failure might occur.

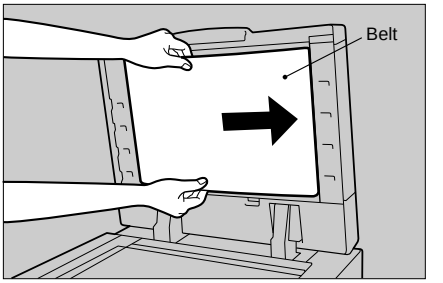
Cleaning The Exposure Glass (Platen Glass)

Cleaning The Platen Cover



Cleaning The ADF Belt

Slide the belt with both hands and wipe it with a dry cloth.



PROJECTOR UNIT (OPTION) OPERATION

FOR USERS USING THE PROJECTOR UNIT (OPTION)

Adjusting The Color Tone/Brightness In Using Negative Film

❑ With this function, the color tone becomes darker when you specify a smaller value, while it becomes lighter in the color balance adjustment described in page 29.

❒ When you copy negative film, adjust the color tone (density of yellow, magenta, and cyan) and brightness (quantity of light) according to the table below. However, even when you use the same type of film, you must use different settings depending on the way the original picture is taken or developed. If you cannot make copies as you want, perform finer adjustment.

❒ You can also use the “Color Balance Adjustment” function of the copier to correct slight color difference.
☛ See page 29.

✦ The following table uses these values to indicate the color tone and brightness levels (the crosshatched values ( ) are the factory-shipped settings):

Yellow (Y)	Darker	← 1 2 3 4 5 6 7 8 9	→ Lighter
Magenta (M)	Darker	← 1 2 3 4 5 6 7 8 9	→ Lighter
Cyan (C)	Darker	← 1 2 3 4 5 6 7 8 9	→ Lighter
Brightness	Darker	← 1 2 3 4 5 6 7 8 9	→ Lighter

- Brightness *1 should be used when film is set in the film holder.
- Brightness *2 should be used when film is set on the exposure glass (platen glass).

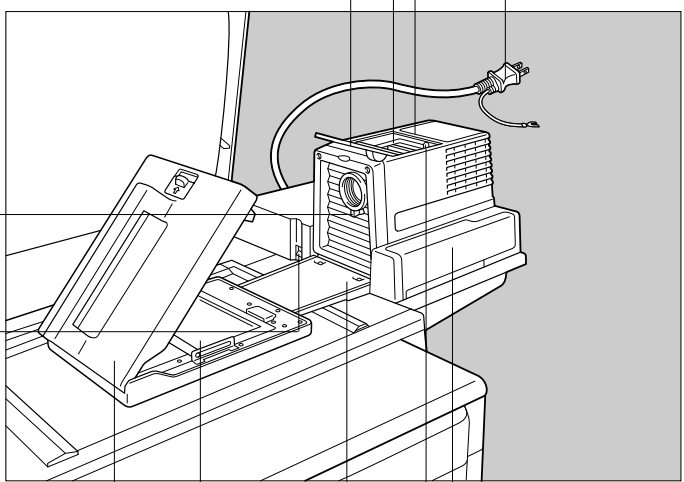
Manufacturer		FUJI						Kodak			
Film type		SUPER G*3		SUPER G ACE *4			REALA *5	SUPER Gold *6			EKTAR *7
ISO sensitivity		100	200	100	400	800	100	100	200	400	100
Color	Y	5	4	5	2	2	5	5	4	2	4
	M	5	5	5	3	5	2	4	2	3	4
	C	5	6	6	5	7	5	6	6	6	5
Brightness *1		5	5	5	5	5	5	5	5	5	5
Brightness *2		4	4	4	4	4	4	4	4	4	4

Manufacturer		Konica				AGFA		
Film type		LV *8			IMPRESA *9	XRG *10		
ISO sensitivity		100	200	400	50	100	200	400
Color	Y	4	4	2	7	2	4	5
	M	5	5	5	4	4	6	6
	C	5	5	6	4	7	4	4
Brightness *1		5	5	5	5	5	5	5
Brightness *2		4	4	4	4	4	4	4

*3, *4, *5: These products are registered trademarks of Fuji Photo Film Co., Ltd.
*6, *7: These products are registered trademarks of Kodak Ltd.
*8, *9: These products are registered trademarks of Konica Corporation.
*10: This product is a registered trademark of Agfa Gevaert AG.

GUIDE TO COMPONENTS

Warning ***Be sure to read "SAFETY PRECAUTIONS" for grounding, connecting the power, and moving the unit.***



POWER CORD
Plug the power cord to the wall outlet.

HOLDER SLOT
Set the holder here.

FILTER SLOT
Insert the filter ("P" or "N") here.

FILM COVER
Open to set the holder or filter.
- To protect the slots from dust, close it when you are not using the projector.

FOCUSING LEVER
Adjust the focus with this lever when you make copies from a glass mount film.

POWER SWITCH
Switches the power ON or OFF.

MIRROR UNIT
Reflects the light from the projector to the copier.

FRESNEL LENS
Pull this up when setting film on the exposure glass (platen glass).

LENS COVER
Open to set the mirror unit.
- To protect from the lens from dust, close it when you are not using the projector.

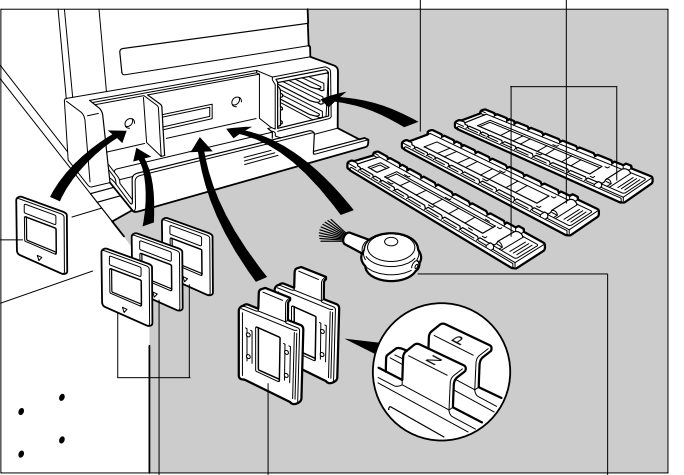
ACCESSORY BOX
Accessories should be stored here.

HOLDER LEVER
Use to set the holder into the holder slot.

❒ The projector base is required.

FILM HOLDERS
Set 35 mm film in one of these holders.
- Film Strip Holder
  Set strip film and base film here.
- Slide Film Holder
  Set mounted positive films in this holder.
- Glass Mount Film Holder
  Set the positive glass mount films in this holder.

LOCK LEVERS
Use to fix the film after setting it in the holder.



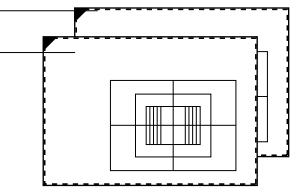
SLIDE MOUNT
Use to make a base film slide.

BASE FILM SLIDES
Use them when performing shading with Negative film.

BLOWER BRUSH
Use to clean the lens or glass.

FILTERS
P = Positive
N = Negative
One of them should be set in the filter slot.

FILM POSITION SHEET
Use a duplicate of this sheet to place the film to the correct position on the exposure glass (platen glass).
Make a copy from the original sheet, cut the surrounding margin on the dotted lines, and cut away the center part corresponding to the size of the film to be copied.
Keep the original film position sheet.
- If two or more film position sheets are required for film sizes to be used, copy the original film position sheet onto B4, 8 1/2" x 14" or A3, 11" x 17" paper. When you copy onto thick paper, you can make the copy of the original film position sheet easier to use.



BEFORE OPERATING THE PROJECTOR

You can use the projector to copy film (35 mm and large format film) originals.

Available Films And Setting

Setting location / Film type/size	Slide film holder	Film strip holder	Glass mount film Holder	Exposure glass (platen glass)
35 mm mount film	○	×	×	×
35 mm glass mount film	×	×	○	×
35 mm strip film	×	○	×	○
60 x 45 mm	×	×	×	○
60 x 60 mm	×	×	×	○
60 x 70 mm	×	×	×	○
60 x 80 mm	×	×	×	○
60 x 90 mm	×	×	×	○
6 x 6 cm	×	×	×	○
4" x 5" (101.6 x 127 mm)	×	×	×	○
Maximum size (140 x 210 mm, 5.5" x 8.2")	×	×	×	○

Important

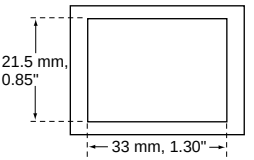
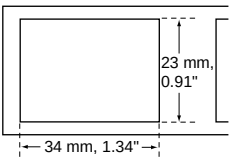
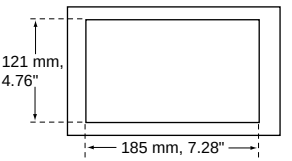
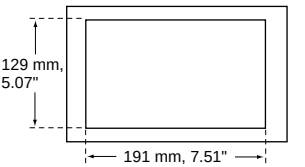
❒ When using film, make sure to take it out from film protecting sheet.

❒ To protect film, follow the precautions shown below.
- Do not use the same film for more than 30 minutes.
- Do not use and store film in rooms where the temperature is more than 30°C/ 86°F.
- For valuable images, we recommend copying from duplicates.

❒ About film:
- Positive film – When held to the light, an image of this film can be seen in the same way as an ordinary photograph.
- Negative film – An image of this film is a reverse image and seen differently from an ordinary photograph when held to the light.
- Positive slide film – This is 35 mm positive film set on a mount for a slide and called “slide film” or “mount film.”
- Glass mount film – This film has the same shape as slide film, but the surface is coated with glass.

About Copying

Glass mount and strip film (set in the film holder)

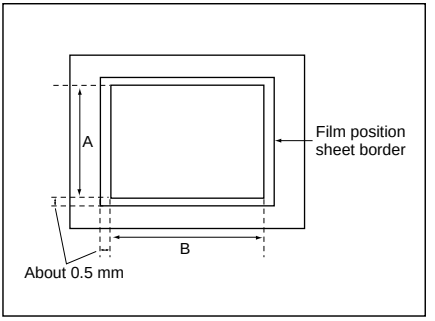
	When using the Slide Film Holder	When using the Film Strip Holder
Available film area for copying		
The copy size when Full Size is selected. * This size corresponds to A5, 5 1/2" x 8 1/2".		

❒ To extend the available film area for copying, use the glass mount film holder and adjust the focus with the focusing lever.

❒ For adjusting the focus, refer to step 11 in “SHADING.” ☛ See page 162.

◆ Large format film (when using the film position sheet)

❒ The copy area available for large format film must be within about 0.5 mm from the film position sheet border as shown below.



Film size	A	B
60 x 45 mm	About 59 mm	About 44.6 mm
60 x 60 mm	About 59 mm	About 59 mm
60 x 70 mm	About 59 mm	About 72 mm
60 x 80 mm	About 59 mm	About 79 mm
60 x 90 mm	About 59 mm	About 86 mm
4" x 5"	About 97 mm	About 122 mm
Maximum size	About 142 mm	About 210 mm

Notes For Operation

- ❒ Do not obstruct the light path from the projector. If the light path is obstructed, the image might not match the original.
- ❒ The shading adjustment is very sensitive, so after the shading operation the mirror unit must be kept perfectly still. Do not move it or allow vibrations to interfere with it. If this happens during copying, lines might appear on the copy. In that case, you must perform shading again.
- ❒ If you press the **Clear Modes/Stand-by** key while you are using the projector, all the projector operations are canceled and the specified mode is cleared.
- ❒ Keep base film, filters, lenses, holders, the mirror unit, and the exposure glass (platen glass) away from dust. Otherwise, you cannot make clear copies. If dust is attached to these parts, clean them. ☛ See page 173.

SETTING THE PROJECTOR IN POSITION

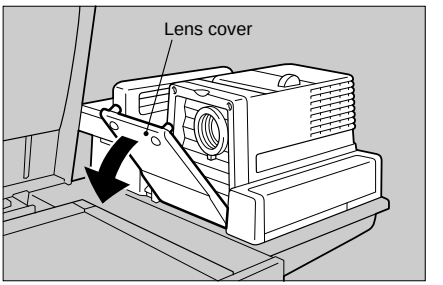
❒ This section describes the preparation for making copies using the projector.

❒ Do not touch to the fresnel lens or the glass of the mirror unit. Fingerprints or dirty parts might appear on the copy.

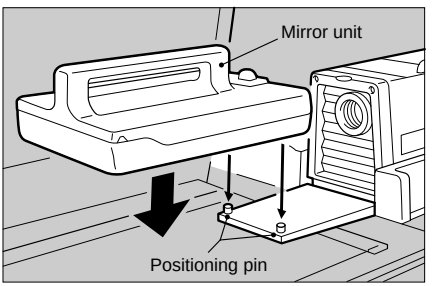
❒ For cleaning the projector parts, see “Daily Maintenance.” ☛ See page 173.

1 Insert the plug of the projector into the wall outlet. Turn on the main switch of the projector.

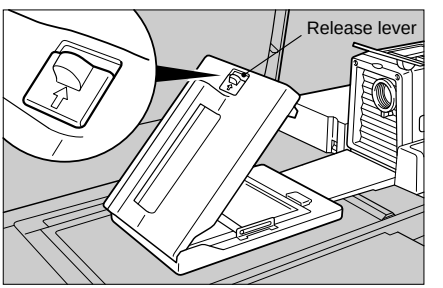
2 Open the lens cover of the projector.



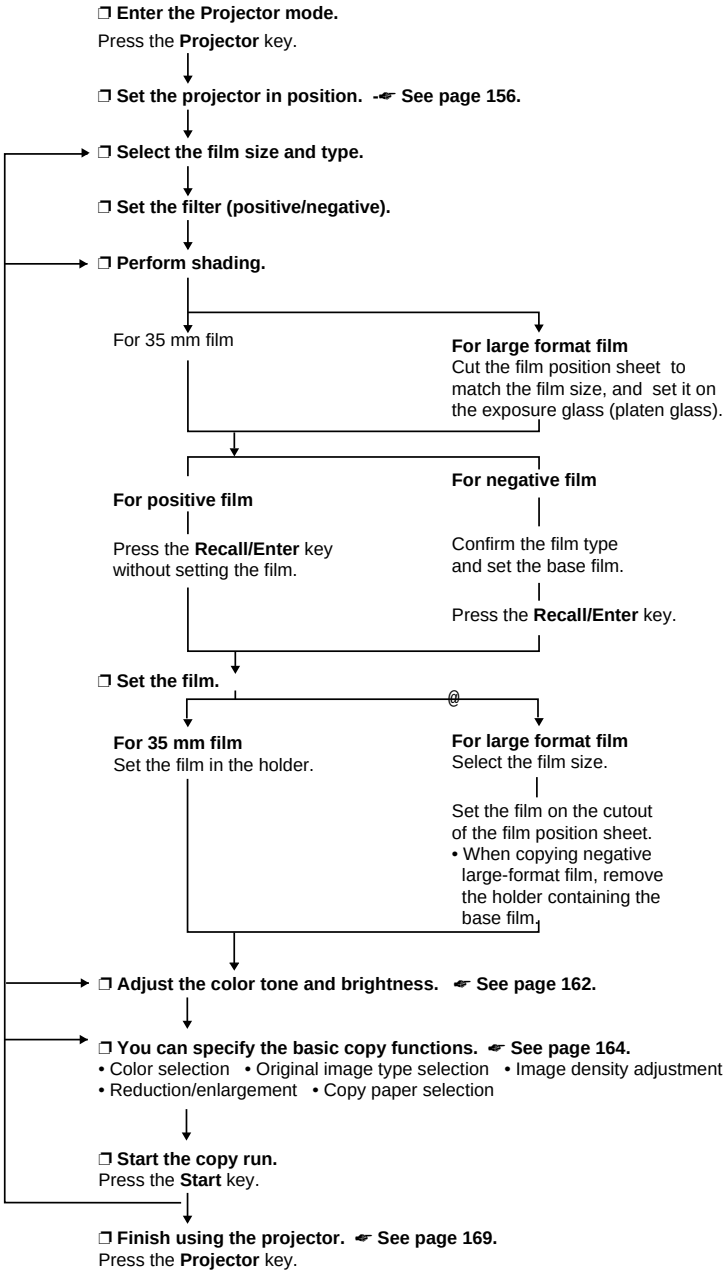
3 Place the mirror unit so that the unit’s position holes fit over the projector’s positioning pins.



4 Slide the release lever of the mirror unit in the direction of the arrow and open the cover of the mirror unit.



OPERATION FLOW

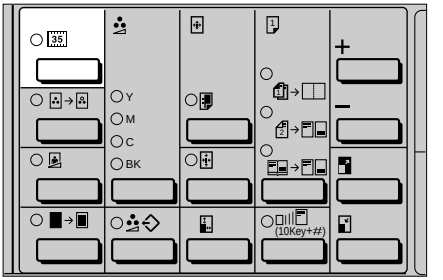

❒ Enter the Projector mode.
Press the Projector key.
❒ Set the projector in position. ☛ See page 156.
❒ Select the film size and type.
❒ Set the filter (positive/negative).
❒ Perform shading.
For 35 mm film
For large format film
Cut the film position sheet to match the film size, and set it on the exposure glass (platen glass).
For positive film
Press the Recall/Enter key without setting the film.
For negative film
Confirm the film type and set the base film.
Press the Recall/Enter key.
❒ Set the film.
@
For 35 mm film
Set the film in the holder.
For large format film
Select the film size.
Set the film on the cutout of the film position sheet.
• When copying negative large-format film, remove the holder containing the base film.
❒ Adjust the color tone and brightness. ☛ See page 162.
❒ You can specify the basic copy functions. ☛ See page 164.
• Color selection • Original image type selection • Image density adjustment
• Reduction/enlargement • Copy paper selection
❒ Start the copy run.
Press the Start key.
❒ Finish using the projector. ☛ See page 169.
Press the Projector key.

SHADING

This section describes the procedure for copying film.

The operational procedure varies depending on the film size and type (positive/negative).

1 Press the **Projector** key.



2 Set the projector in position and press the **Recall/Enter** key.

❒ See page 156, “SETTING THE PROJECTOR IN POSITION”.

Open lens cover
Set mirror unit>#

3 Select the film type (1: Positive, 2: Negative) using the **Number** keys and press the **Recall/Enter** key.

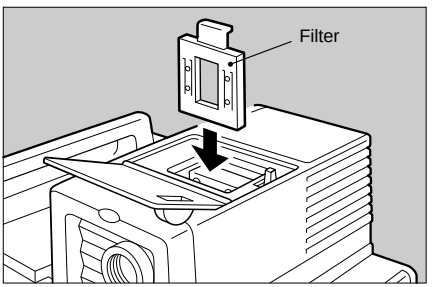
Select Film type (1–2>#)
1:Positive 2:Negative 1

4 Select the film setting location (1: 35 mm film, 2: Large format film) using the **Number** keys, and press the **Recall/Enter** key.

[XXX](1–2>#)
1:35mm 2:Special Sizes 1

5 Insert the positive or negative filter into the filter slot based on the film type, and press the **Recall/Enter** key.

❒ Set the filter so that the alphabet character (P/N) on the top faces forward (the metal part faces right).

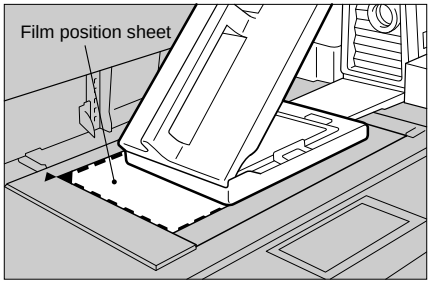


When selecting the exposure glass (platen glass) (large format film):

❶ Cut the film position sheet to match the film size, and set it on the exposure glass (platen glass).

- Fit the ▶ mark of the film position sheet to the standard position on the exposure glass (platen glass).

❷ Press the **Recall/Enter** key.



6 Perform shading.

❒ The shading operation varies depending on the film type. ☛ See below, "When copying positive film". ☛ See below, "When copying negative film".

When copying positive film:

❶ Press the **Recall/Enter** key without setting the film.

- The lamp is lit and shading is started.

[Positive/XXXX]
To perform shading > #

❒ To cancel shading, press the **Clear/Stop** key.

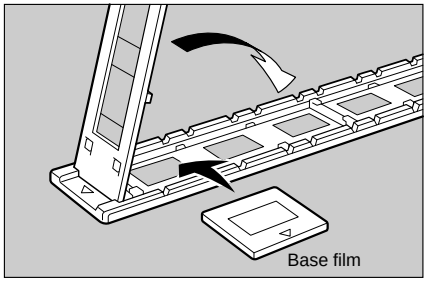
When copying negative film:

❶ Set the base film that fits the film in the film strip holder.

❒ The projector unit provides three types of base film slides as accessories. ☛ See page 152.

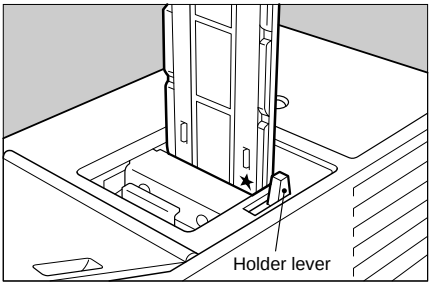
❒ Set the base film in the film strip holder in the direction shown in the illustration on the right. There is no difference between both sides of the base film.

❒ If you use film that does not have suitable base film, you can make the base film yourself. ☛ See page 173.



❒ When you set both the base film and the film to be copied simultaneously, you need not replace the holder later.

❷ While pressing the holder lever to the left, insert the holder slightly in the holder slot. Then press the holder until the ★ mark is placed as shown in the illustration.



❸ Press the **Recall/Enter** key.

❹ Press the **Recall/Enter** key.

- The lamp is lit and shading is started.

❒ To cancel shading, press the **Clear/Stop** key.

[Negative/XXXX]
To perform shading > #

7 When copying negative large-format film, remove the holder containing the base film.

[Negative/Special Sizes]
Remove base film > #

8 When copying large format film, select the film size (1 - 8) using the **Number** keys and press the **Recall/Enter** key.

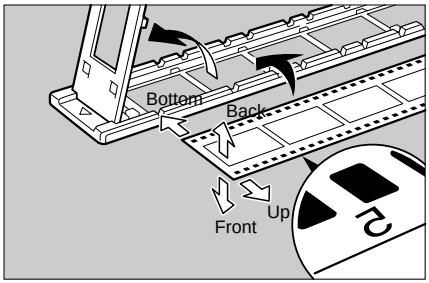
1	60 × 45mm
2	60 × 60mm
3	60 × 70mm
4	60 × 80mm
5	60 × 90mm
6	6 × 6cm
7	4" × 5" 101.6 × 127mm
8	Maximum size (142 × 210 mm or 5.5" × 8.2")

9 Set the film and press the **Recall/Enter** key.

When copying 35 mm film:

- When copying strip film

❶ Set the film in the film strip holder.



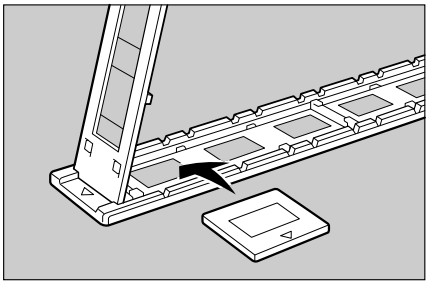
❒ Place the strip film so that its front and back sides are set in the correct directions.

❒ Put the front side of the film face down (the side where the film number is shown in reverse must face upward) and set it in the film strip holder.

❒ Adjust the film position so that the film partition fits the holder partition.

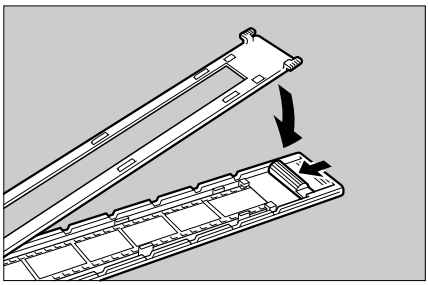
When copying slide film:

❶ Set the film in the slide film holder or glass mount film holder.



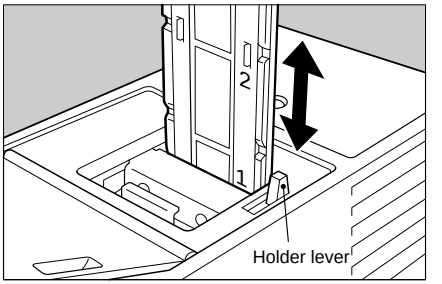
❒ The film must be set sideways with the front side face down in the holder.

❷ Close the holder and lock it.



❸ While pressing the holder lever to the left, insert the holder slightly in the holder slot. Then adjust the holder by sliding it up and down to position the correct frame for copying.

- The copier enters the ready condition.

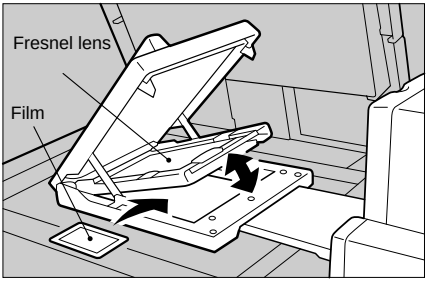


❒ Confirm the arrow mark of the holder to set the sides of the film in the correct directions.

When copying large format film

❶ Lift the Fresnel lens and place the film on the cutout of the film position sheet that has already been set.

- The copier enters the ready condition.



❒ Set the film with the front side face down and lower the Fresnel lens by pressing it against the film.

10 Specify whether to adjust the color tone (1: Adjust, 2: Not adjust) using the **Number** keys, and press the **Recall/Enter** key.

Color/Density adjustment (1–2>#)
1:Yes 2:No 1

❒ To adjust the color tone, adjust the yellow, magenta, and cyan tones to a lighter or darker setting.

❒ When you adjust the color tone, see "Adjusting The Color Tone And Density." ☛ See page 166.

11 When copying 35 mm film, specify whether to adjust the focus manually (1: Adjust, 2: Not adjust) using the **Number** keys, and press the **Recall/Enter** key.

Adjust focus (1–2>#)
1:Yes 2:No 2

❒ The focus is adjusted automatically when you make copies without adjusting it manually.

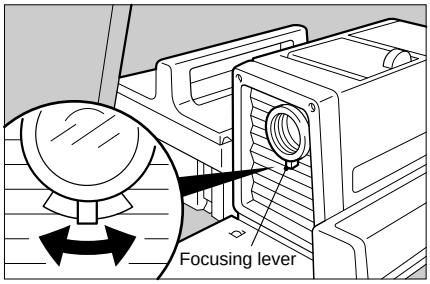
When adjusting the focus manually

❶ Set blank sheets on the exposure glass (platen glass) and under the mirror unit, and press the **Recall/ Enter** key.

❷ Adjust the focus with the focusing lever, and press the **Recall/Enter** key.

Place white paper
under mirror unit>#

Adjust focus with knob
located under lens>#



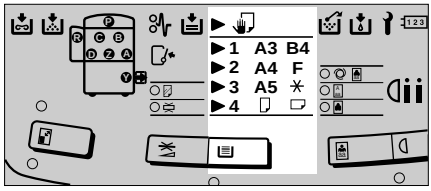
12 You can specify the basic copy functions.

❒ See page 164, “Selecting Copier’s Functions”.

❒ When you start copying without setting the functions, go to step 14.

13 Select copy paper using the **Paper Selection** key.

❒ When using the bypass feed table, specify the paper size. ☛ See page 70, “COPYING FROM THE BYPASS FEED TABLE”.



14 Specify the number of copies and press the **Start** key.

❒ The copier starts the copy run.

❒ For setting the subsequent copy runs, see “Changing The Copy Conditions.” ☛ See page 167.

Selecting Copier’s Functions

This section describes the following functions which you can specify after shading:

❒ Color selection

❒ Image density adjustment

❒ Original image type selection

❒ Reduction/enlargement

You can also specify the following functions. You can operate them in the same way as in making copies without the projector.

- “Color Conversion” ☛ See page 27.
- “Image Adjustment” ☛ See page 33.
- “Full Image” ☛ See page 56.
- “Margin Adjustment” ☛ See page 81.
- “Sort/Stack” ☛ See page 89.

❒ You cannot specify the Single Copies, Interrupt, Auto Paper Select, Staple, Auto Image Density, Auto Color Calibration, and Program functions.

Color Selection

1 Select the color mode using ⁂/⁂ key.

❒ If you do not set any other functions, press the **Start** key to copy.

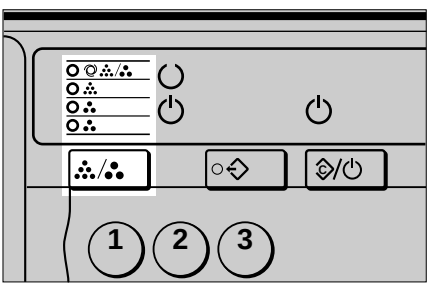
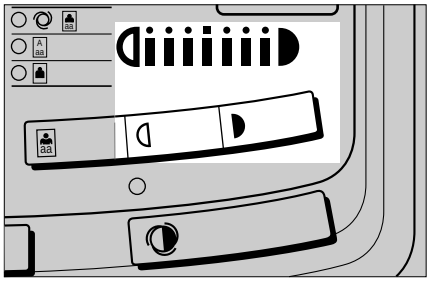


Image Density Adjustment

1 Adjust the density using the **Lighter** and **Darker** keys.

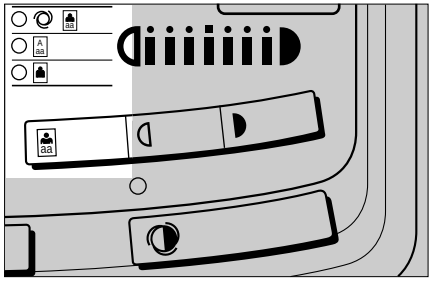
❒ If you do not set any other functions, press the **Start** key to start a copy operation.



Original Image Type Selection

1 Select the original type (Photo mode/Auto (Letter/Photo) mode) using the **Original** key.

❒ If you do not set any other functions, press the **Start** key to start a copy operation.



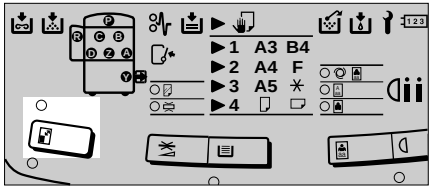
Reduction/Enlargement

The cautions and limitations against the reduction/enlargement function are the same as in making copies without the projector.

Auto Reduce/Enlarge

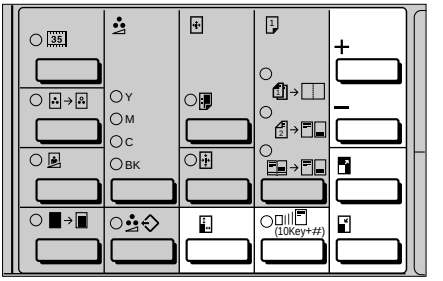
❶ Press the **Auto Reduce/Enlarge** key.

- If you do not set any other functions, press the **Start** key to start a copy operation.



Preset Reduce/Enlarge/Zoom/Directional Magnification

❶ Select the **Enlarge**, **Reduce**, **Zoom/Magnification**, **Zoom (10 key + #)**, or **Directional Mag.** key to select or specify the magnification.

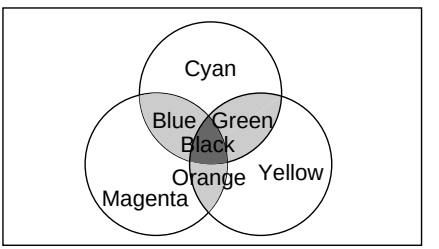


- You can operate these functions in the same way as in making copies without the projector. ☛ See page 76, “Preset Reduce/Enlarge”. ☛ See page 77, “Zoom”. ☛ See page 79, “DIRECTIONAL MAGNIFICATION”.

Adjusting The Color Tone and Density

You can adjust the overall color tone of copies by adjusting the yellow, magenta, and cyan tones to a lighter or darker setting only when you are using the projector.

❒ When adjusting the color tone, it is useful to imagine the relationship among the three basic colors. For example, when the overall color tone of copies is greenish, you may want to adjust the cyan and yellow tones to a lighter setting or adjust the magenta tone, the complementary color, to a darker setting.



- You should adjust the color tone for each film slide to make more correct copies because the projection condition varies each time.

1 Adjust the color tone and density (1 ~ 9) using the **Number** keys, and press the **Recall/Enter** key.

❒ To change the entered value, reenter another value before pressing the **Recall/Enter** key.

❒ Y, M, and C represent yellow, magenta, and cyan, respectively.

Color/Density (1–9>#)
Y:5 M:5 C:5 Density:5

1	Lighter
|	↑
5	|
|	↓
9	Daker

1	Lighter
|	↑
5	|
|	↓
9	Daker

2 Repeat step 1.

3 Press the **Recall/Enter** key.

Changing The Copy Conditions

This section describes the operations to be performed after copying is completed.

Adjusting The Color Tone And Density

1 Confirm that Item 1 is blinking, and press the **Recall/Enter** key.

Projector (1–2>#)
1:Continue 2:End job

2 Enter “2” using the **Number** key and press the **Recall/Enter** key.

(1–3>#)1:Continue
2:Retry 3:Select film type 1

3 Confirm that Item 1 is blinking, and press the **Recall/Enter** key.

(1–2>#) 1:Color/Density
2:Shading

❒ For the procedure after this step, see “Adjusting The Color Tone And Density.” ☛ See page 166.

Changing The Film Size and Type

1 Confirm that Item 1 is blinking, and press the **Recall/Enter** key.

2 Enter “3” using the **Number** key and press the **Recall/Enter** key.

(1–3>#) 1:Continue
2:Retry 3:Select film type 1

3 Select the film size and type and continue the procedure.

❒ For the film selection and the operations after it, see the descriptions after step 3 in “SHADING.” ☛ See page 158.

Performing The Shading Operation Again

Perform the shading operation again if you cannot make copies as you want or you move the mirror unit inadvertently.

1 Confirm that Item 1 is blinking, and press the **Recall/Enter** key.

2 Enter “2” using the **Number** key and press the **Recall/Enter** key.

(1–3>#) 1:Continue
2:Retry 3:Select film type 1

3 Enter “2” using the **Number** key and press the **Recall/Enter** key.

(1–2>#) 1:Color/Density
2:Shading

❒ For the procedure after this step, see the descriptions after step 6 in “SHADING.” ☛ See page 159.

Using The Same Type Of Film

1 Confirm that Item 1 is blinking, and press the **Recall/Enter** key.

Projector (1–2>#)
1:Continue 2:End job

2 Confirm that Item 1 is blinking, and press the **Recall/Enter** key.

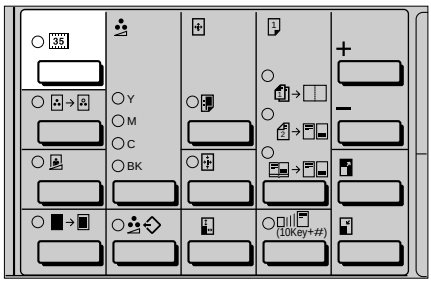
(1–3>#) 1:Continue
2:Retry 3:Select film type 1

❒ For the procedure after this step, see the descriptions after step 12 in "SHADING." ☛ See page 163.

Exiting The Projector Mode

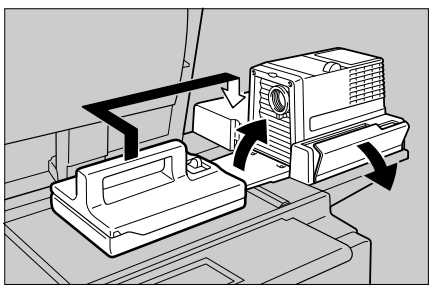
Finish using the projector and return to the copy mode.

1 Press the **Projector** key.



❒ You can also press the **Clear Modes/Stand-by** key to finish using the projector.

2 Return the mirror unit, used holders, and other accessories to the original positions and close the lens cover.



❒ Do not touch the Fresnel lens or the glass of the mirror unit. If there are fingerprints or other dirty parts on the lens or glass, wipe them. ☛ See page 173, "Daily Maintenance".

❒ You can store a frequently used filter in the filter slot.

3 Turn off the power switch.

Important

❒ Though the power switch is turned off, the cooling fan may be still working. Therefore, please wait a few moments before unplugging the power cord.

IF THE PROJECTOR UNIT DOES NOT OPERATE AS YOU WANT

This section describes the corrective actions and cleaning operations you should perform if you cannot use the projector to make copies as you want.

If The Copy Image is Improper

❒ If the copy image is out of focus:
- The film might not be set in the holder properly. Reset the film correctly in the holder.
- Adjust the focus. ☛ See page 162, step 11 in “SHADING”.

❒ If the edge of the original image does not appear on the copy
- Check the size of the area that can be copied. When setting film in the holder, be sure to position the desired frame properly. For the relationship between the original film size and the copy size, see “About Copying.” ☛ See page 154. To extend the area that can be copied, use the glass mount film holder and focus manually.

❒ If lines appear on the copy:
- Dust and foreign matter might be attached to base film, a filter, a lens, a holder, the mirror unit, or the exposure glass (platen glass). Clean these parts. ☛ See page 173.
- The mirror unit might be moved by copier operation. Perform the shading operation again.
- Black lines might appear on the edge of an image depending on the way film or a holder is set. This is because the holder frame or film edge is projected on the copies.
- If copying from negative film, thin black lines might appear on the lighter part of the copy, even after shading.

❒ If a ring pattern appears on the copy:
- The ring pattern is present on the film itself, and the copier is sensitive enough to pick it up. Try the following:
  Open and close the film cover.
  Slide the film in the holder a bit.
  Turn the film around in the holder. (Do not flip it over.)

If An Error Message Is Displayed

❒ If the message “Shading error. To resume shading” is displayed
Some possible causes for this message are as follows. Take corrective action as shown.

- When copying 35 mm positive film, the shading operation is performed with the film set in the projector.
  → Remove the film holder and perform shading again with no film set in the projector.
- When copying large format film, the shading operation is performed with the Fresnel lens lifted up.
  → Lower the Fresnel lens and perform shading again.
- The light path from the projector is obstructed.
  → Do not place anything between the projector and the mirror unit so that the light path will not be obstructed.
- The mirror unit is not set properly.
  → Set the mirror unit properly. ☛ See page 156, "SETTING THE PROJECTOR IN POSITION".
- The filter (positive/negative) does not match the film type (positive/negative).
  → Set the suitable filter that matches the film type. ☛ See page 158, "SHADING".

If you cannot eliminate a problem by taking the above action, there might be some other causes. See the next section "If Something Goes Wrong." ☛ See below.

If Something Goes Wrong

❒ If the copier does not enter the Projector mode even when you press the **Projector** key

❒ If the projection lamp does not light

❒ If the projection lamp does not go off

❒ If copies are blank when copying negative film

❒ If black images are copied when copying positive film

- The optical fiber cable is disconnected.
  → Turn off the copier and projector, and connect the optical fiber cable. Then turn them on again.

The optical fiber cable is a black cable connected on the rear side of the projector and copier.

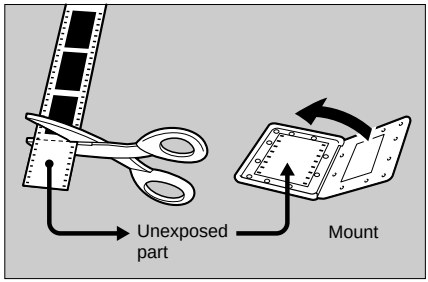
- The projector is turned off or the power cord is disconnected.
  → Turn off the copier, connect the power cord of the projector to the wall outlet, and turn on the projector. Then turn on the copier again.
- The lamp is burned out. (the lamp does not light)
  → Please contact your service representative about replacing the lamp.
- A failure occurs on the copier or projector.
  → Contact your service representative.

Making Base Film

This section describes the action you should take if you use film that does not have suitable base film.

❒ Using unexposed film:
If you do not plan on copying from this type of film often, use an unexposed frame of the same film strip, if available, when performing shading.

❒ Making new base film:
If you plan on copying from this type of film often, make a base slide using an unexposed, developed frame of the film.



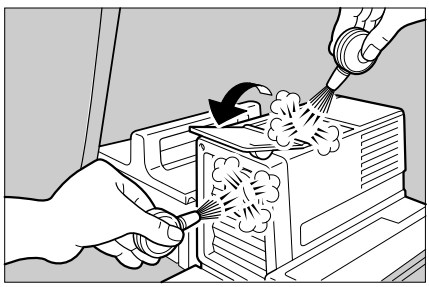
Daily Maintenance

This section describes the way to clean the projector.

❒ Dust and foreign matters might be attached to the following parts. Check and clean them.
- Base film
- Filter
- Lens
- Holder
- Mirror unit
- Exposure glass (platen glass) ☛ See page 148.

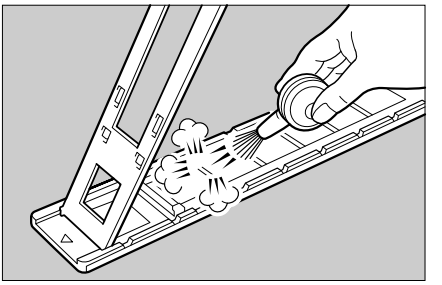
Exterior

Wipe with a dry soft cloth.



Lens and holder/filter slot

Blow off any dust using the blower brush.



❒ If there are fingerprints on the lens, wipe them with a soft cloth.

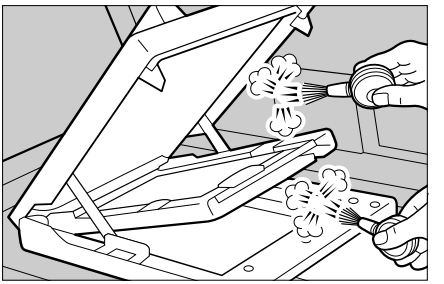
Film holder

Blow off any dust using the blower brush.

❒ If there are fingerprints on the glass, wipe with a soft cloth.

Mirror unit

Blow off any dust using the blower brush.



SPECIFICATIONS

COPIER

Configuration:	Desktop	
Photosensitivity Type:	OPC	
Copy Process:	Dry electrostatic transfer system	
Development:	Dry two-component development	
Fixing:	Heating roll system	
Exposure Glass: (platen glass)	Stationary original exposure type	
Write:	Sequential four-color write (yellow, magenta, cyan, and black)	
Original read:	Sequential read through CCD	
Warm-up time:	Less than 360 seconds (20°C, 68°F)	
First Copy Time*:	Normal mode	OHP/Thick Paper mode
Full Color:	32 seconds or less	50 seconds or less
Black:	15 seconds or less	35 seconds or less
Cyan, Magenta, Yellow:	20 seconds or less	
Yellow + magenta, Yellow + cyan, Magenta + cyan:	30 seconds or less	

Copying Speed (Full Size):

Full Color (4 colors):

Normal mode	OHP/Thick Paper mode
3 copies/minute (A4□, 8½" x 11"□)	1.6 copies/minute (A4□, 8½" x 11"□)
1.6 copies/minute (A3□, 11" x 17"□)	1 copy/minute (A3□, 11" x 17"□)

Yellow, magenta, cyan, black:

Normal mode	OHP/Thick Paper mode
21 copies/minute (A4□, 8½" x 11"□)	2.6 copies/minute (A4□, 8½" x 11"□)
11 copies/minute (A3□, 11" x 17"□)	1.7 copies/minute (A3□, 11" x 17"□)

* When using A4□, 8½" x 11"□ paper, Full Size mode, copier's 250-sheet tray, Auto (Letter/Photo) mode, and Auto Image Density mode

Magenta + cyan, Magenta + yellow:

Normal mode	OHP/Thick Paper mode
4 copies/minute (A4▯, 8 1/2" x 11"▯)	2.2 copies/minute (A4▯, 8 1/2" x 11"▯)
3 copies/minute (A3▭, 11" x 17"▭)	1.3 copies/minute (A3▭, 11" x 17"▭)

Yellow + cyan:

Normal mode	OHP/Thick Paper mode
3 copies/minute (A4▯, 8 1/2" x 11"▯)	1.8 copies/minute (A4▯, 8 1/2" x 11"▯)
2 copies/minute (A3▭, 11" x 17"▭)	1.2 copies/minute (A3▭, 11" x 17"▭)

Original Type: Sheet/Book/Film/Objects

Original Size: Maximum: A3▭ (297 x 420 mm), 11" x 17"

Copy Size: ☛ See page 42 or 45.

Copy Paper Weight: 52 ~ 157 g/m^2, 13.9 ~ 41.7 lb

Paper Tray: 64 ~ 90 g/m^2, 17.1 ~ 23.9 lb

Bypass Feed Table: 52 ~ 157 g/m^2, 13.9 ~ 41.7 lb

Unit for two-sided copying: 64 ~ 104 g/m^2, 17.1 ~ 27.6 lb

Non-reproduction Area:

Leading edge	5 +/– 2 mm or less
Trailing edge	2.5 +/– 2.0 mm or less (Side 2: 6.0 +/– 2 mm or less)
Left edge	2 +/– 2 mm or less
Right edge	2 +/– 2 mm or less

Reproduction Ratio: ☛ See page 76.

Resolution: 400 dpi

Paper Feed: 250-sheet front loading tray x 1 + Bypass feed table (40 sheets of paper)

Copy Number Input: Number keys, 1 - 99

Advanced Functions: Color Selection (Auto Color Select, Full Color Copy, Black Copy, Single Color)

Auto Copy Select

Auto Image Density

Original Image Type Selection (Auto (Letter/Photo) mode, Letter mode, Photo mode)

Auto Start

Reduction/Enlargement (Auto Reduce/Enlarge, Preset Reduce/Enlarge, Zoom, *Directional Magnification)

*Image Shifting (Margin Adjustment, Centering)

Single Copies (Combine 2 Originals, 2 Sided Original, Book Original)

*Color Creation (Color Conversion)

Color Balance Adjustment

Full Image

Image Adjustment (Background Density Control, Pastel, Sharp/Soft, Auto Color Calibration)

Program

*Two-sided Copies

User Tools (including user codes)

Clear Modes

Stand-by, Auto Reset

Interrupt Copying

* This function can be used only if your copier has a unit for two-sided copying.

Power Source: See the inside front cover of this manual.

Power Consumption:

Warm-up	1.25 kW
Stand-by	0.25 kW
Copying	1.15 kW
Maximum	1.5 kW

Dimensions (W×D×H):

	Width	Depth (without the operation panel)	Height {up to the exposure glass (platen glass)}
Copier only	620 mm, 24.5"	680 mm, 26.8"	592 mm, 23.4"
With the optional paper tray unit	620 mm, 24.5"	680 mm, 26.8"	970 mm, 38.2"

Full System Area (W×D): 1280 × 680 mm, 50.4" × 26.8"
(when the extenders of the bypass feed table are pulled out for A3, 11" x 17", or other large sizes of paper and the copy tray is attached.)

Noise Emission:

Sound pressure level (The measurements are made according to ISO 7779 at the operator position.)

Copier only	Full system*
less than 61 dB (A)	less than 65 dB (A)

* Full system: Copier with document feeder, 1500-sheet tray unit, and a sorter stapler.

Sound power level (The measurements are made according to ISO 7779.)

	Copier only	Full system*
Stand-by	less than 54 dB (A)	less than 58 dB (A)
Copying (This value is for the black copy mode.)	less than 67 dB (A)	less than 71 dB (A)

* Full system: Copier with document feeder, 1500-sheet tray unit, and a sorter stapler.

Weight: Copier Only
Basic: 105 kg, 231.3 lb
With unit for two-sided copying: 109 kg, 240.1 lb

DOCUMENT FEEDER

Automatically feeds originals sheet by sheet.

Mode: ADF mode, SADF mode

Original Size: A3 ~ B6
11" × 17" ~ 8 1/2" × 5 1/2"

Original Thickness:

Normal mode:	52 ~ 128 g/m², 14 ~ 34 lb
2 Sided Original mode:	52 ~ 105 g/m², 14 ~ 28 lb
Thin Paper mode:	40 ~ 52 g/m², 11 ~ 14 lb

Number of originals to be set:
50 sheets (80 g/m², 20 lb) or 6 mm height

Copying Speed: 1 to 1 copy mode: 3 copies/minute
(Full Color Copy mode, A4, 8 1/2 × 11")
21 copies/minute (Single Color mode, A4, 8 1/2 × 11")

Power Consumption: Maximum: 45 W
(Power is supplied from the copier.)

Dimensions (W×D×H): 610×507×130 mm, 24.1" × 20.0" × 5.2"

Weight: 10.5 kg, 23.2 lb

PAPER TRAY UNIT

Adds two or three paper trays.

Copy Paper Weight: 52 ~ 105 g/m², 13.8 ~ 27.9 lb

Available Paper Size: ☞ See page 45.

Power Consumption: Maximum: 111 W (Power is supplied from the copier.)

Copy Tray Capacity: 500 sheets × 2 trays/500 sheets × 3 trays

Dimensions (W×D×H): 620 × 632 × 390 mm, 24.5" × 24.9" × 15.4"

Weight: 36/38 kg, 79.3/83.7 lb

SORTER STAPLER

Sorts copies automatically and staples sorted copies.

Number of Bins: 10 bins + Delivered paper tray

Delivered paper tray: Paper Size for Tray: A3, B4, A4, A4, B5, B5, A5, A5, post card (100 × 148 mm), B6, 11" × 17", 8 1/2" × 14", 8 1/2" × 11", 8 1/2" × 11", 8 1/2" × 5 1/2", 8 1/2" × 5 1/2"

Tray Capacity: 100 sheets (52~80 g/m², 13.9~21.2 lb)
50 sheets (81~128 g/m², 21.6~34.0 lb)
30 sheets (129~157 g/m², 34.4~41.7 lb)

Paper Thickness: 52 ~ 157 g/m², 13.9 ~ 41.7 lb

10 Bins: Paper Size for Bins: A3, B4, A4, A4, B5, B5, and A5
11" × 17", 8 1/2" × 14", 8 1/2" × 11", 8 1/2" × 11", and 5 1/2" × 8 1/2"

Bin Capacity:

Sort mode: 30 sheets/bin (A4, 8 1/2" × 11" or smaller)
25 sheets/bin (B4, 8 1/2" × 14" or larger)

Stack mode: 25 sheets/bin (A4, 8 1/2" × 11" or smaller)
20 sheets/bin (B4, 8 1/2" × 14" or larger)

Paper Thickness: 52 ~ 157 g/m², 13.9 ~ 41.7 lb

Staple: Stapler Capacity: 20 copies
Paper Size for Stapler: A3, B4, A4, A4, B5, B5, 11" × 17", 8 1/2" × 14", 8 1/2" × 11", 8 1/2" × 11"

Paper Thickness: 52 ~ 80 g/m², 13.9 ~ 21.2 lb

Stapling Position: One point, parallel binding

Power Consumption: Maximum: 33 W (Power is supplied from the copier.)

Dimensions (W×D×H): 381 × 548 × 443 mm, 15.0" × 21.6" × 17.5"

Weight: 12.4 kg, 27.4 lb (sorter stapler only)

PPC TABLE

This is a copier table which can store consumables.

Dimensions (W×D×H): 620 × 632 × 390 mm, 24.5" × 24.9" × 15.4"

Weight: 20.8 kg, 45.9 lb

PPC FILM PROJECTOR

This unit allows you to copy film directly.

Configuration: Stationary model on the right side of the copier

Projection: Full image projection system (Projector mode)
Backlighting system (Backlight mode)

Available Film Sizes: ☞ See page 153.

Available Film Types: ☞ See page 153.

Focusing: Adjustable

Power Consumption: Maximum: 93 W (The power supply is different from the copier's.)

Dimensions (W×D×H): Projector: 300 × 442 × 212 mm, 11.9" × 17.5" × 8.4"

Mirror unit: 298 × 232 × 50 mm, 11.8" × 9.2" × 2.0"

Weight: Projector: 10 kg, 22.1 lb

Mirror unit: 5 kg, 11.1 lb

PPC FILM PROJECTOR FIXTURE

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